

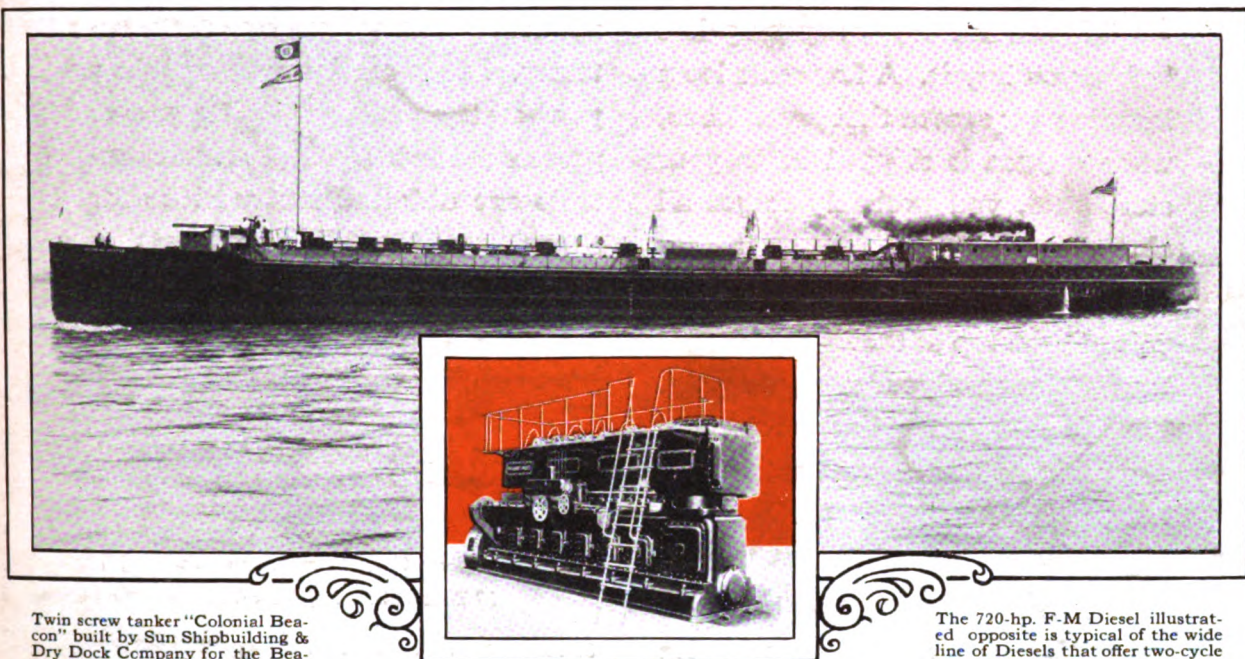
# Marine Review

1751 7 1927

Reg.  
U.S.  
Pat.  
Off.

*The National Publication Covering the Business of  
Transportation by Water*

October, 1927



Twin screw tanker "Colonial Beacon" built by Sun Shipbuilding & Dry Dock Company for the Beacon Oil Company of Boston. All propulsion and auxiliary sets by Fairbanks-Morse

The 720-hp. F-M Diesel illustrated opposite is typical of the wide line of Diesels that offer two-cycle simplicity with minimum operating and maintenance costs

## As ever—the leader

The simple sturdy Diesels used for main propulsion and auxiliaries in this modern 253-foot tanker, are a clear-cut example of what can be accomplished by constant and painstaking development of one sound principle of Diesel construction.

Two 360-hp. Diesels drive her twin screws. Two 50 kw. F-M Diesel-Generator Sets and one 18 kw. Diesel-Generator set supply current for motors and lighting. These units all share the basic advantages of Fairbanks-Morse two-cycle construction with airless fuel injection—the principle that is common to the wide line of F-M propulsion engines in ratings

from 20 to 840 hp. and marine type auxiliary units from 18 kw to 120 kw.

From this broad line the builder or owner of any type of marine craft can choose Diesels and auxiliaries exactly suited to his service—Diesels that are the product of a plant where every step of production is controlled by the designers of the engine—Diesels that have proved their reliability on every type of craft—Diesels that are the product of a plant that is building more engines for marine and stationary service than all other manufacturers combined.

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**ENGINES**

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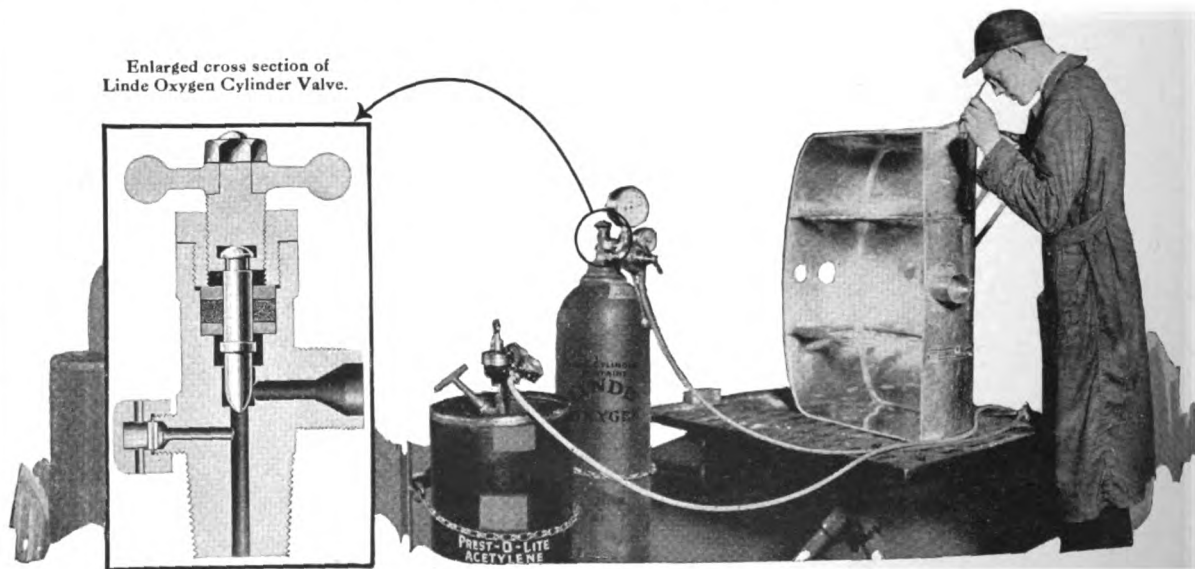
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*Unit of Union Carbide and Carbon Corporation*



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# LINDE OXYGEN

# Marine Review

The National Publication Covering the Business of  
Transportation by Water

CLEVELAND

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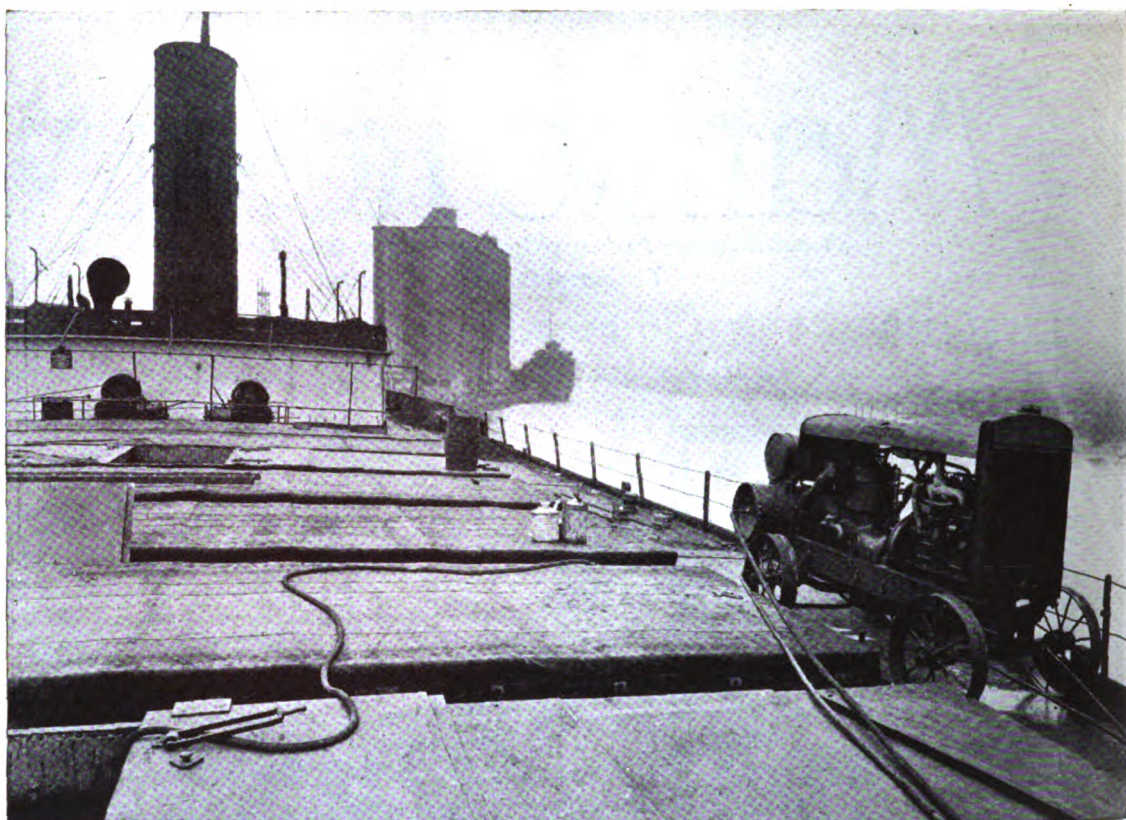
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A portable air compressor which can be lifted on deck and used for cutting and riveting while the ship continues traveling. All our yards have these compressors. They can be taken anywhere by our floating equipment.



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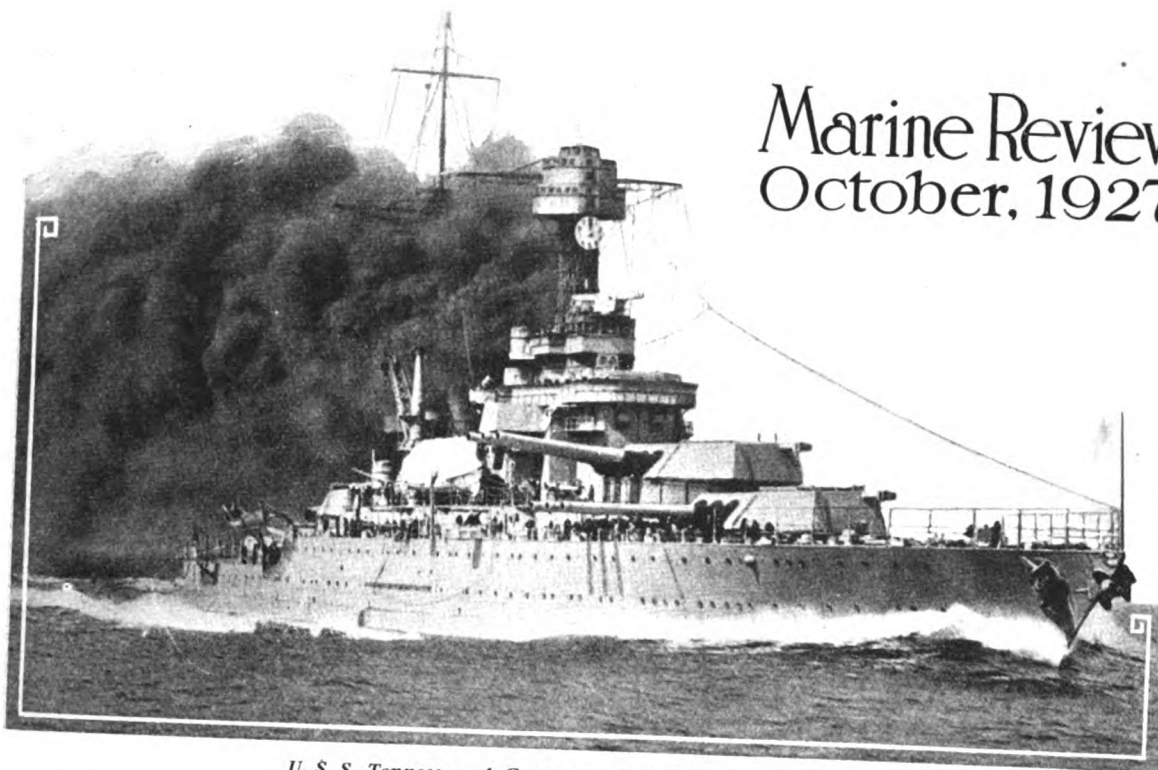
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*U. S. S. Tennessee—A Guarantee of the Freedom of the Seas*

# A Merchant Marine Is Necessary to Guarantee National Safety

By Capt. Ralston S. Holmes, U. S. N.

**O** THE United States two theaters of war are possible. In one, such as the World war, the strife will be far from home, and the physical effects will only be apparent in increased activity throughout the country and in a vast concentration of effort toward one end—winning the war. In the other, the war will be brought to our shores and we shall be not only immersed in the same activity and concentration of effort, but we shall be confronted by the enemy at our gate, throwing a pall of uncertainty and feverishness over everything that we do. If we must have a war, which kind is preferable? It is true that the natural resources of the United States are such that we might lock ourselves in and endure a long war, fought entirely at home. Such a war would mean that we had surrendered the sea, that our foreign commerce was dead, that our outlying possessions were surrendered, that we were completely isolated.

Surely it is apparent that even were we ultimately to win such a war, the time and money necessary for restoration to our former position would make it prohibitive. The money necessary would be vastly more than the amount necessary

to prevent such a condition from arising. Then too, with commerce cut off, money would be much less available and much scarcer than it is today, with foreign commerce active and the country prosperous.

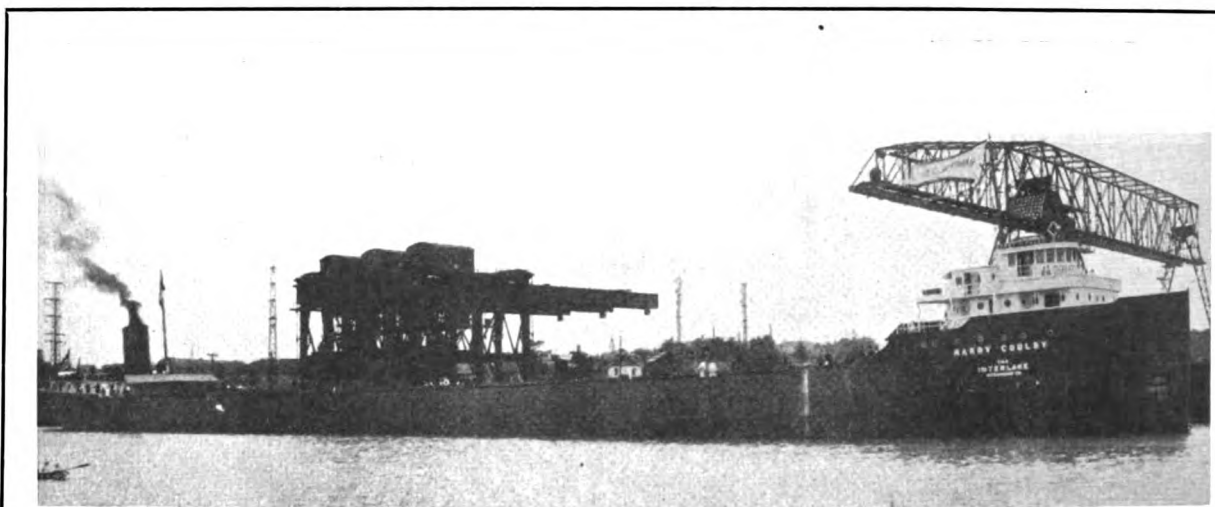
To fight the other kind of war, away from home, we need a navy and a merchant marine, and the one is no more important than the other. Each furnishes to the other something that it cannot furnish itself.

We have no right to expect that our next war will be like the last, in which we attached ourselves to an operating organization already in existence. We must have our own organization prepared to act single handed from the beginning.

Are we content to decide that the war we shall accept is the war at home, driving us into our shells, breaking down our carefully built up foreign commerce, crippling our finances, reaching into our very land? If this is the kind of war we prefer, or if we think human nature has changed so there will be no more wars, then we can reduce our navy to a police force and can continue to ship most of our goods in foreign mer-

*(Continued on Page 50)*





*Lake Freighter Harry Coulby at Lorain, O., loaded with 14,650 tons of Coal for Maiden Voyage, Sept. 10, 1927.*

## S. S. Harry Coulby Is Largest American Lake Cargo Carrier

**P**ICKANDS, MATHER & CO., Cleveland, operates the second largest fleet on the Great Lakes, a fleet exceeded in size only by that of the Pittsburgh Steamship Co., the Great Lakes transportation subsidiary of the United States Steel Corp. At the present time the fleet, operated by Pickands, Mather & Co. and owned by the In-

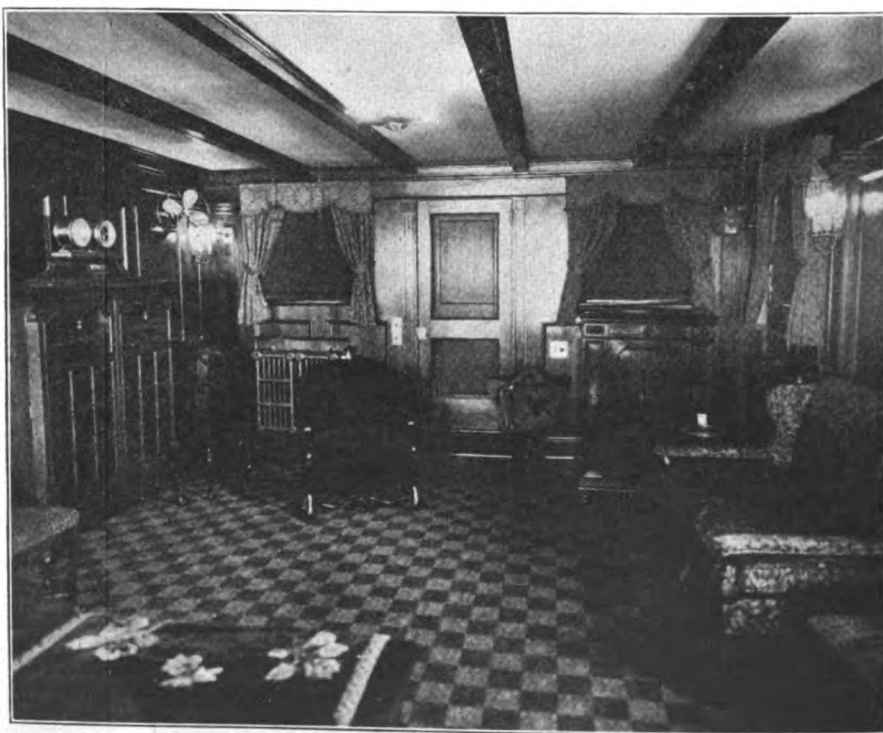
terlake Steamship Co., consists of 44 vessels of a total carrying capacity on a draft of 19 feet of 360,000 tons (2240 pounds to the ton). Eight of these vessels are of large capacity, 600 feet and over in length, and of recent construction.

The latest addition to this fleet is the S. S. HARRY COULBY, the largest and most elaborately equipped Ameri-

can freighter ever built for service on the Great Lakes. This remarkable vessel which cost in the neighborhood of \$1,000,000 is named in honor of the president of the Interlake company, Harry Coulby. She may be said to mark the culmination of Mr. Coulby's career as the outstanding operator of vessels on the Great Lakes. The story of his life, his rise from obscurity and poverty to wealth and power in the industrial life of the nation, is indicative of the native ability and character of the man and of the unlimited latent resources of the country.

### An Interesting Career

Before going into the description of this new vessel it will be worth while to sketch briefly the interesting career of Harry Coulby. He was born on a farm near Nottingham, England, Jan. 1, 1865. When he was eighteen years old he decided to go to America. He landed in New York, March, 1883, with a very definite object in view. That object was to see the Great Lakes of America and to ship on them as a sailor. Not having any money left, he walked all the way from New York to Cleveland, taking six weeks to do it, working to pay expenses as he went along. He arrived in Cleveland too late to get a job on any of the vessels. As a boy in England he had studied shorthand by himself, and as there was no chance



LIVING ROOM OF GUEST QUARTERS ON THE S. S. HARRY COULBY



to sign on as a sailor he became private secretary to Mr. Newell, then president of the Lake Shore and Michigan Southern railroad. Leaving this position because his salary of \$40 a month was hardly sufficient for living expenses, he became private secretary to Col. John Hay, now one of the great characters in American history, as secretary to Lincoln, secretary of state under McKinley and Roosevelt, and ambassador to Great Britain.

At the time Coulby got his job with Colonel Hay, the latter was busy, in conjunction with Nicolay, in the preparation of their famous life of Lincoln. That a man so well known later in life for vigorous action should have been in his youth in contact with a noted scholar and diplomat, famous for his personal charm, is an odd circumstance, and it is likely that this association in the formative years of his life helped to give him that breadth of vision and sense of humanity which have always characterized him in his dealings with the problems of business and in his attitude toward men.

#### Becomes a Lake Vessel Operator

At the age of 21, after having served three years as Colonel Hay's private secretary, Coulby went to work as a clerk for the then recently established firm of Pickands, Mather & Co. The company at that time had one room for an office and the staff consisted of the two active partners and three clerks, including Coulby. From this humble position at a salary of \$50 a month he rose to active partnership and to a dominant



Harry Coulby

#### A Sense of Fairness

*ALL of the great corporations must hereafter think of the man who is on the firing line. He does not ask for favors but he demands opportunity and justice. He should be kept moving onward—moving for himself and thereby for his employer. We study machinery, finance and processes. Man is more important—and infinitely more interesting.\**

position as a lake vessel operator. In 1904 at the age of 39 his reputation as an organizer and manager of vessel property was so firmly established that he was summoned by the Steel corporation to take active charge as president and general manager of the large fleet of the Pittsburgh Steamship Co. Under his management this company grew and prospered to such an extent that in 1912, eight years after he took charge its fleet numbered 102 vessels transporting in that year around 23,000,000 tons of ore and 1,000,000 tons of coal.

All through this period Mr. Coulby continued his interest in Pickands, Mather & Co. In 1924 after 20 years of successful management of the large fleet of the Pittsburgh Steamship Co., he retired from the presidency and active management in order to resume completely his old association with the firm of Pickands, Mather & Co. He continued for a time as chairman of the board of the Pittsburgh Steamship Co. After a period of comparative leisure in which he traveled extensively, making a trip around the world, he was elected president of the Interlake Steamship Co., succeeding his old friend and associate for many years, H. G. Dalton, who continued as a director. He took over the duties of president, the office he now holds, on Jan. 1, 1926. Such in brief is the history of the man after whom this newest and largest American lake freighter is named.

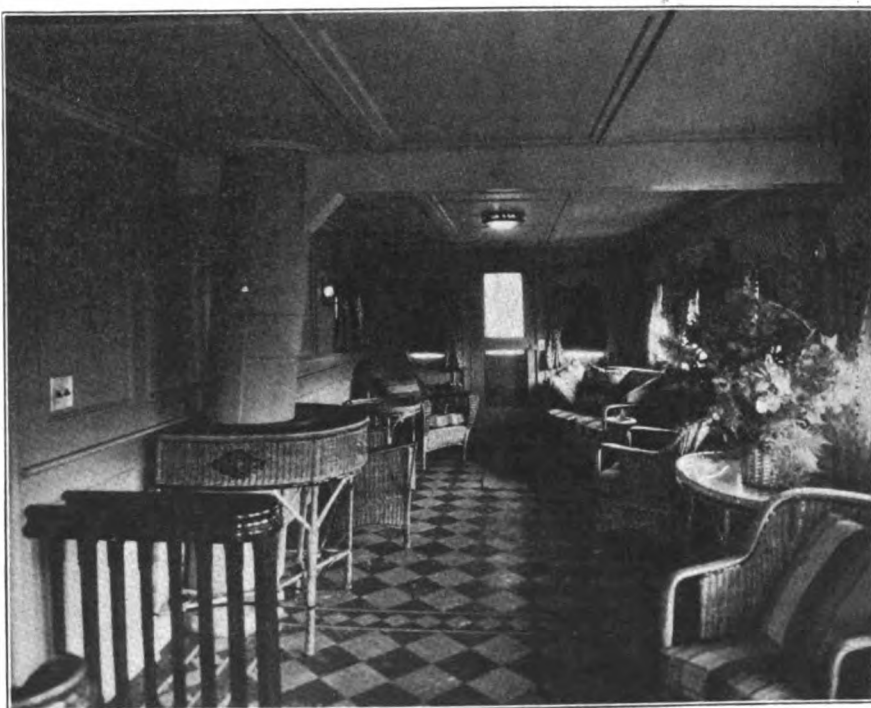
The keel of the steamer HARRY COULBY was laid Feb. 7, 1927, at the Lorain, O., plant of the American

TABLE I

#### General Particulars S. S. Harry Coulby

Length overall, ft., ins.	630-9
Length between p. p., ft., ins.	607-0
Breadth molded, ft., ins.	65-0
Depth molded, ft., ins.	33-0
Displacement on 20-foot draft, in short tons.	21,380
Block co-efficient at 20-foot W. L.	.867
Deadweight in long tons at 20-foot draft.	14,000
Deadweight in short tons at 20-foot draft.	15,680
Capacity, cargo holds, cu. ft.	589,257
Bunker capacity, tons of coal.	521
Gross tons, U. S. measurement.	10,179
Net tons, U. S. measurement.	8,145
Official number.	226,742
Depth of water bottom, ft., ins.	5-6
Deadrise in inches.	3
Tumble home in inches.	12
Number of hatches, spaced 24 feet between centers.	18
Width of hatches, clear opening, ft., ins.	40-0
Width of hatches, inside coamings, ft., ins.	47-0
Number of cargo holds.	4
Number of double bottom tanks.	17

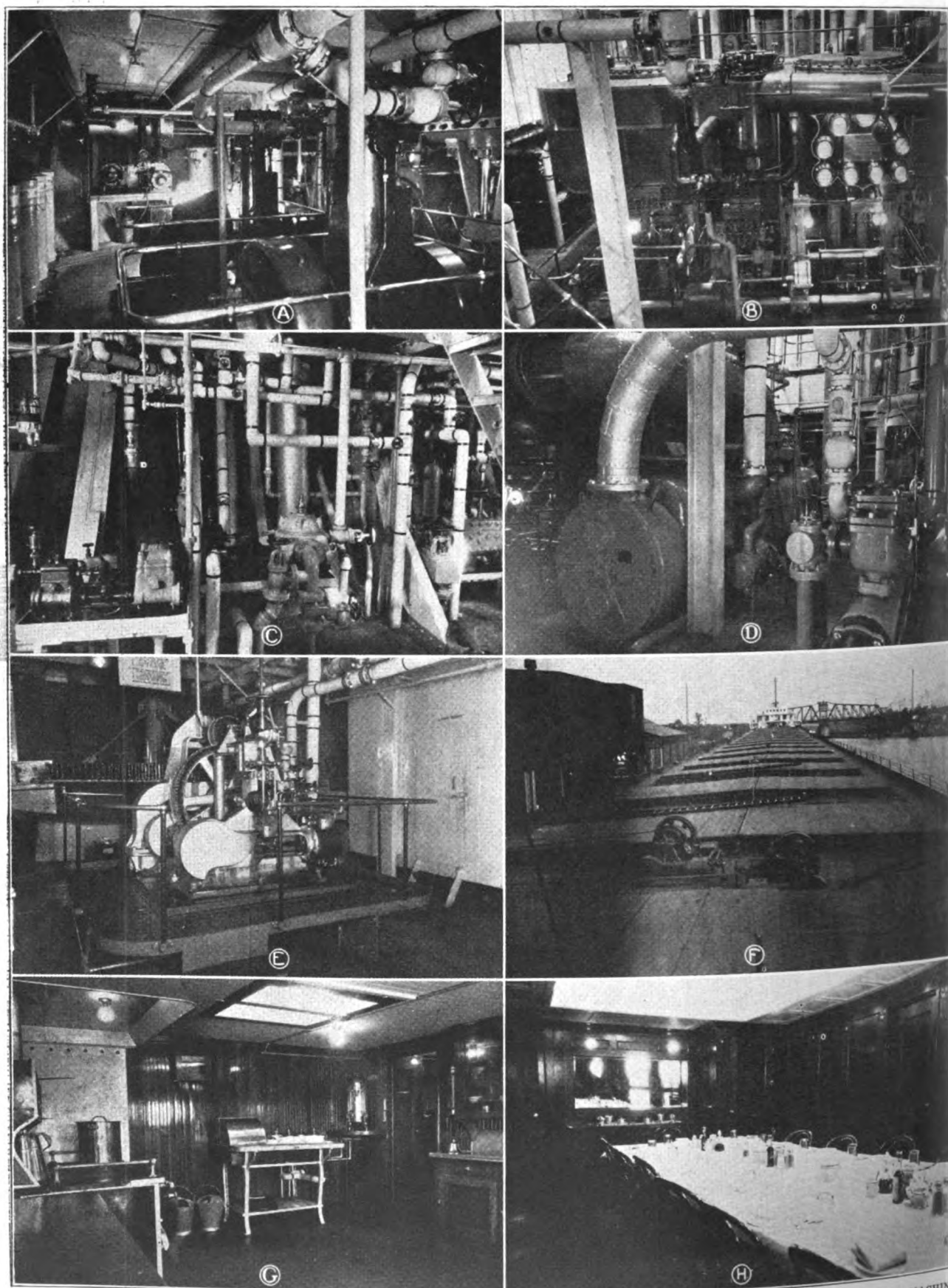
\*A statement by Harry Coulby, reprinted from an article by James B. Morrow in the Philadelphia Record for July 19, 1912.



SUN PARLOR FOR THE USE OF GUEST PASSENGERS ON THE S. S. HARRY COULBY



# New Lake Freighter S. S. Harry Coulby



VIEWS OF S. S. HARRY COULBY—UPPER LEFT—TWO 25 K. W. AND ONE 10 K. W. ENGBERG GENERATORS. FRICK ICE MACHINE AND ELECTRIC. UPPER RIGHT—MAIN ENGINE 3000 I. H. P. NEXT BELOW, LEFT—DISTILLED WATER, CIRCULATING, COOLING AND SANITARY PUMPS. NEXT BELOW, RIGHT—WHEELER CONDENSER AND WARREN HORIZONTAL FEED PUMP. NEXT BELOW, LEFT—STEERING ENGINE IN FAN TAIL. NEXT BELOW, RIGHT—VIEW LOOKING FORWARD. HATCH ENGINES. TELESCOPING HATCH COVERS. LOWER LEFT—GALLEY FOR OFFICERS AND CREW—LOWER RIGHT—OFFICERS' DINING ROOM IN AFT END OF SHIP



Coul Ship Building Co. The launching took place on April 30, the sponsor being Mrs. Kenneth A. Scott. Completed early in September the COULBY sailed on her maiden voyage on Sept. 10, from Lorain, O., with a cargo of 14,650 tons of coal.

This vessel was built to the highest class in Lloyd's and the American Bureau of Shipping for lake service. General particulars and dimensions are separately grouped in Table I for convenient reference. Some displacement aft was sacrificed when the lines of the hull were laid down in order to give the vessel an unusually clean and easy run to the propeller.

In construction the vessel is a combination of the transverse and longitudinal systems. The bottom frames, tank top stiffeners, and spar deck beams run longitudinally and the side frames and hopper stiffeners run transversely. Straight arches are used. This construction is used to give a tank top of much greater strength than is possible with the usual transverse method, and also to give better support to the spar deck stringers.

In building the propelling machinery for this ship two points were kept especially in mind. One was to build it heavier than customary so that it could easily stand the heaviest service without danger of developing

any weakness. The other was to give it unusual finish so that its fine appearance would be an additional incentive to the officers responsible for its operation to keep it in good condition.

A single propeller is driven by one triple expansion steam engine with high, intermediate and low pressure cylinders of 25½, 41, and 67 inches diameter, respectively. The common stroke is 42 inches, the engine developing 3000 indicated horsepower at 95 revolutions per minute.

The cylinders are arranged with the low pressure forward, the intermediate

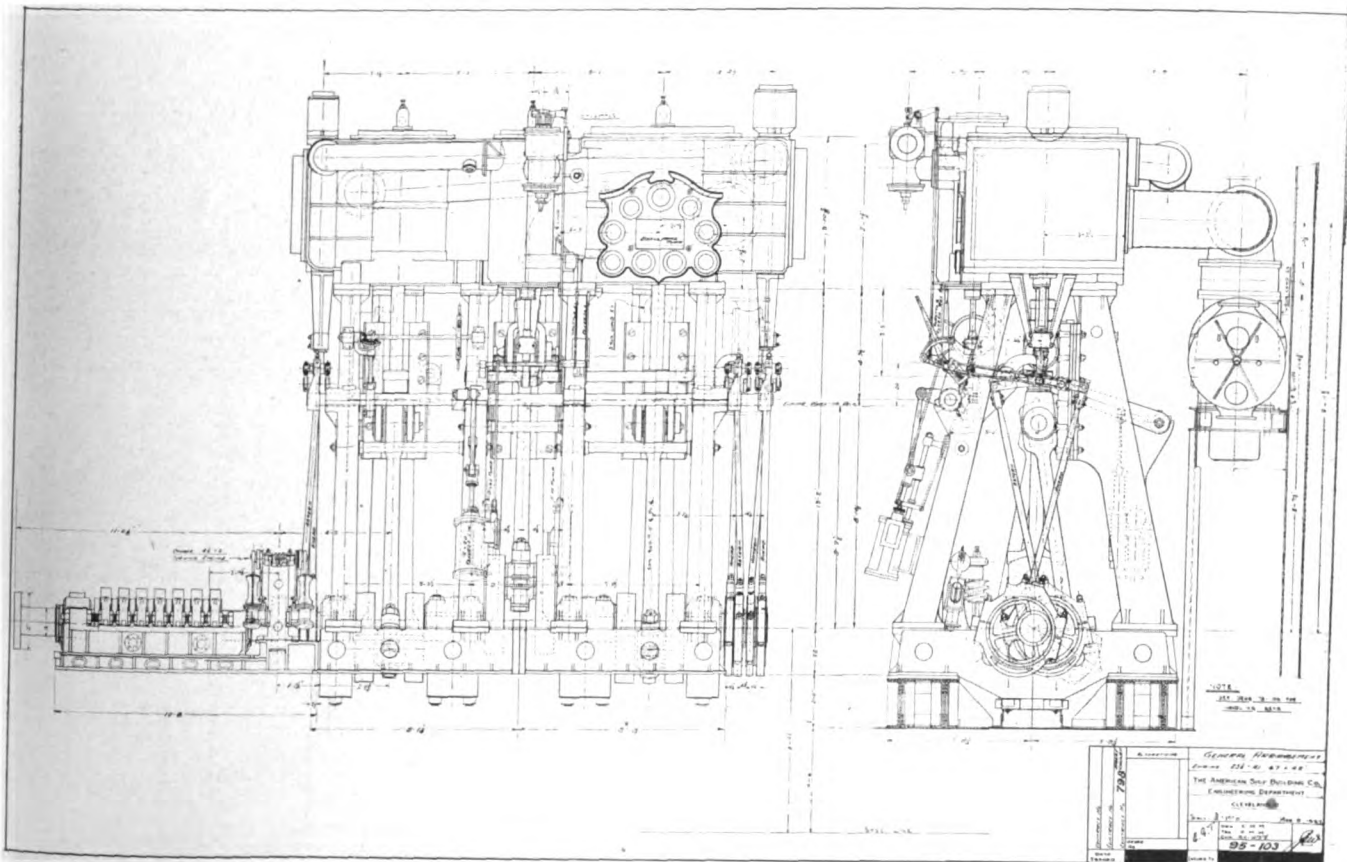
aft and the high pressure in the center. The intermediate and low pressure cylinders have steam admitted through double ported slide valves, while the high pressure cylinder takes steam in the center through a piston valve. All the valves are actuated by a Stephenson link valve gear of the overhung type. Both intermediate and low pressure slide valves are fitted with Lovekin assistant cylinders to overcome the weight of the valves and their inertia.

All the main engine cylinders are steam jacketed both at the bottom and top heads, and the high pressure

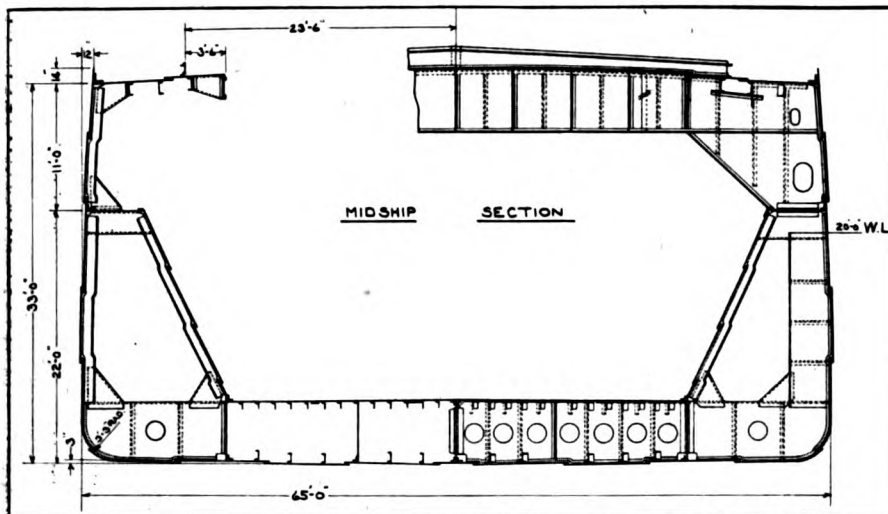
TABLE II  
Principal Auxiliaries on S. S. Harry Coulby

	Inches
1—Main feed pump, Warren, horizontal simplex.....	14 x 8½ x 16
1—Auxiliary feed pump, Warren, horizontal duplex.....	12 x 6 x 12
2—Ballast pumps, Morris, 15-inch centrifugal with engines.....	8 x 14 x 10
2—Ballast pumps, Warren, vertical duplex.....	10 x 14 x 16
1—Mates pump, Warren, horizontal duplex.....	7½ x 5 x 10
1—Sanitary pump, Warren, vertical duplex.....	7½ x 5 x 10
1—Lift pump, Warren, horizontal duplex.....	4½ x 3½ x 4
1—Condensate pump, Union, horizontal duplex.....	7½ x 7½ x 6
1—Ice water pump, Warren, horizontal duplex.....	3 x 2 x 3
1—Cooler pump, Warren, horizontal duplex.....	5½ x 4¾ x 5
1—Circulating pump, Morris, 12-inch centrifugal with 9 x 9 engine.....	4½ x 2¾ x 4
2—Oil pumps, Warren, horizontal duplex.....	9 x 8
2—Generators, Engberg, 25-kilowatt with engine.....	6 x 6
1—Generator, Engberg, 10-kilowatt with engine.....	
1—Two-ton, Frick ice machine, electric.....	
1—Two-inch centrifugal pump, Dravo-Doyle, driven by two horsepower motor for Thermo-fan.....	
1—Thermo-fan, motor driven.....	
6—Deck engines, size.....	9 x 10
2—Hatch engines, size.....	6 x 6
1—Windlass, spur gear, size.....	10 x 10
1—Direct acting steering engine, size.....	9 x 9

Note—All of the Deck Machinery was built by the American Ship Building Co.



GENERAL ARRANGEMENT OF THE MAIN ENGINE OF THE S. S. HARRY COULBY TRIPLE EXPANSION STEAM ENGINE OF 3000 I. H. P.



MIDSHIP SECTION OF THE S. S. HARRY COULBY

in addition has a jacketed liner in the barrel. Steam used or condensed in these jackets is carried to traps and is discharged to the feed and filter tank in order to recover all the heat possible. A considerable conservation of heat and a reduction in condensation is made possible by so steam jacketing the cylinders. It is not the Prosser type in which the entire surface of the cylinders is jacketed, but it is a step in this direction, and the results obtained on the trial trip demonstrated to the satisfaction of the engineers concerned that it is dis-

tinctly advantageous as far as it goes. There is also an advantage in this type of cylinder construction in that the heads having double walls heavily ribbed are much stronger and the casting more durable.

The main engine bed plate is of cast iron of the girder type and has four bearings of 13¼-inch bore. It is supported at the center of the ship by a steel foundation and is fitted on cast iron blocks. The bed plate and foundation thus give a solid and rigid support to the engine. There are three back columns each carrying a

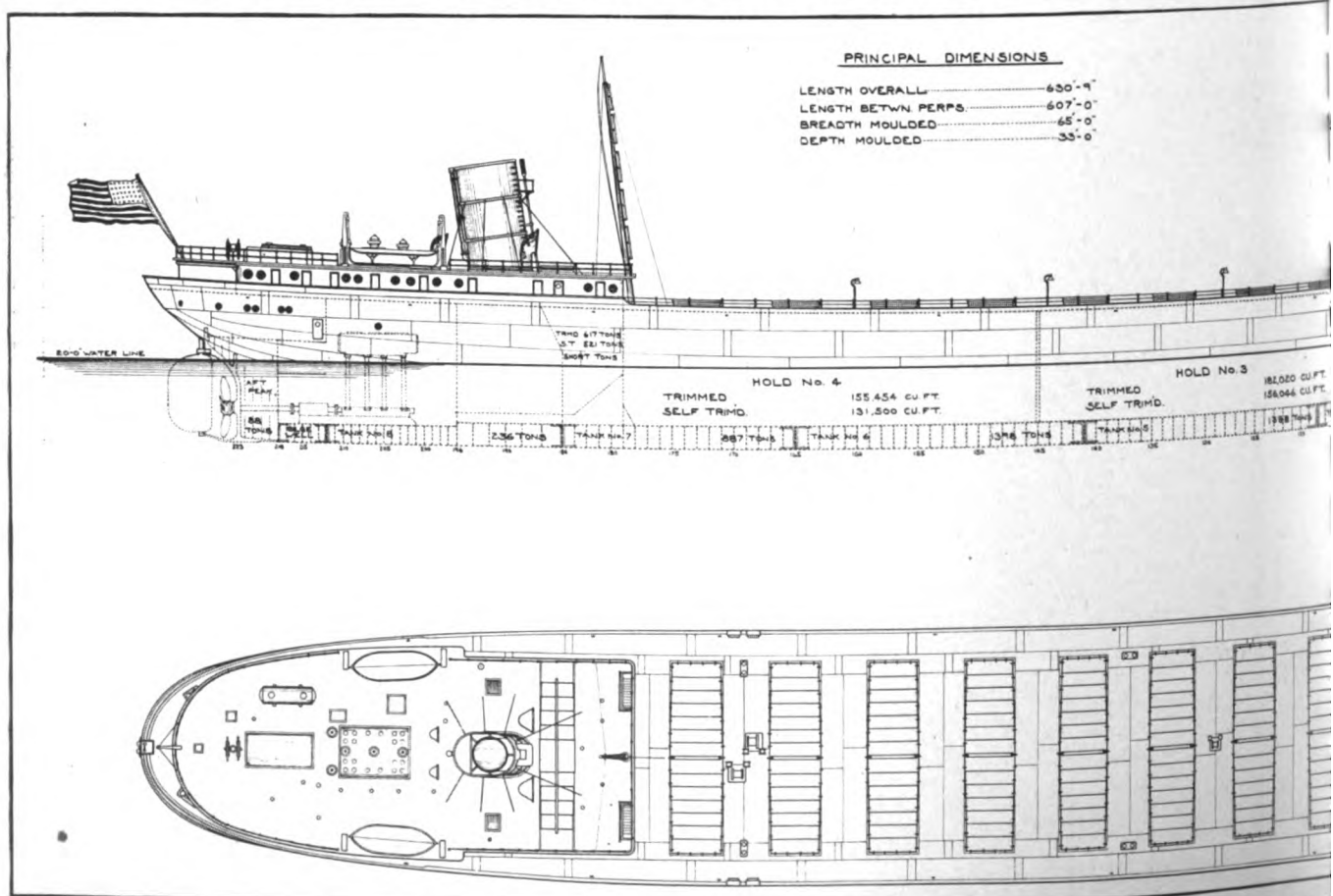
slipper guide. There are four front columns of massive design. By this arrangement easy access is afforded to all bearings and connections. Connecting rods are an even 9 feet from center to center with bolt connections to the bottom end boxes and wedge adjustments for the top end brasses. The crossheads are of cast steel, in this case polished all over for appearance.

#### Good Material and Ample Size

Packing on all three piston rods and valve rods is of the C. Lee Cook Mfg. Co.'s make. Pistons are of box type strongly constructed and are all supplied with C. Lee Cook's metallic graphitic iron packing rings. In the high pressure cylinder these rings are suitable for 80 degrees superheat.

Throughout, the main engine is of massive design and the shafting and working parts are considerably above the requirements of Lloyd's and American Bureau. Piston rods and cross-head pins are unusually large and are made from special high carbon steel of about 80,000 pounds per square inch tensile strength. The crankshaft and the webs were forged from Lloyd's and American Bureau ingot steel requirements.

A standard horseshoe type of thrust bearing is used so designed that the



OUT BOARD PROFILE AND PLAN VIEW OF THE S. S. HARRY COULBY, THE LARGEST AMERICAN

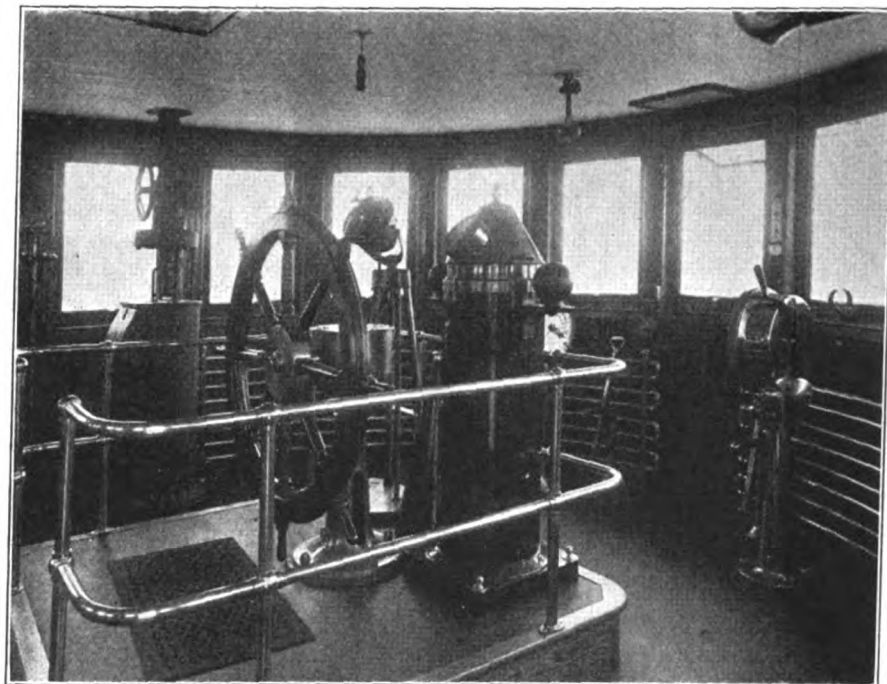


thrust is only 29 pounds per square inch when the vessel's speed is 12 $\frac{3}{4}$  miles per hour. There are seven collars all water cooled in center core. The thrust works in an oil bath which is cooled by water pipes. In addition to the oil bath two duplex pumps are provided, one of which is a standby, to maintain a pressure of from 40 to 60 pounds per square inch on these collars.

#### Cast Steel Sectional Propeller

A Wheeler surface condenser of 2700 square feet cooling surface receives exhaust steam from the low pressure cylinder of the main engine. The air pump is of the Wheeler air jet type, situated above the condenser. There are two of these pumps, each one equal to the necessary capacity for the condenser. The condensate pump of horizontal duplex type and 7 $\frac{1}{2}$  x 7 $\frac{1}{2}$  x 6 inches in size is located below and immediately under the condenser.

The propeller is of cast steel and of sectional type with four blades. It is 15 feet 3 inches in diameter and is set at a pitch of 14 feet 9 inches. The blades are all ground smooth and are adjustable in pitch, one foot either way. The stern tube is of heavy cast iron with a stern bearing of brass lined with lignum vitae. The forward end is tapered to allow the



INTERIOR OF PILOT HOUSE ON THE S. S. HARRY COULBY

removal of the propeller shaft.

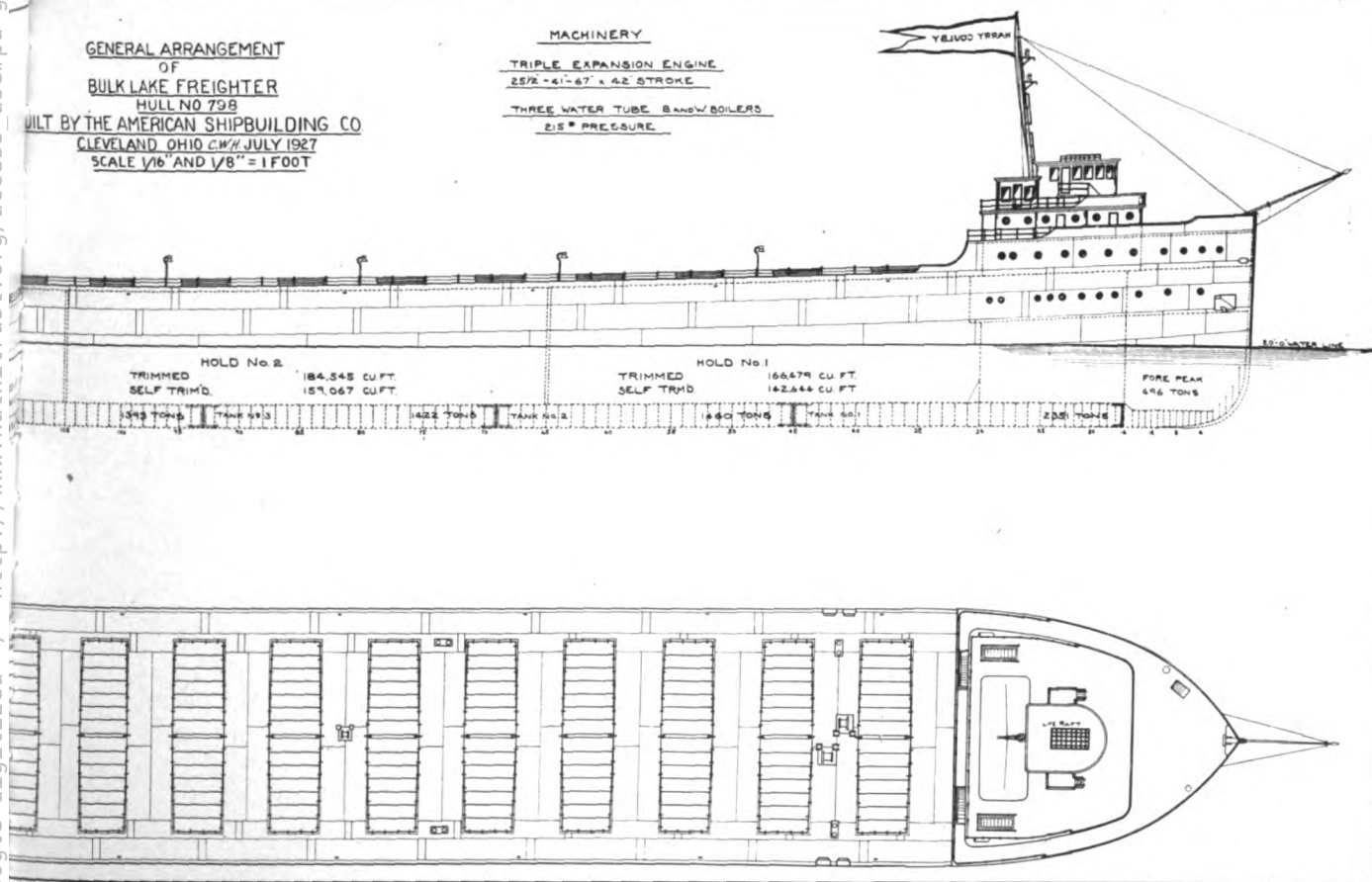
Electrical current is furnished by three Engberg reciprocating steam engine generators. Two are of 25-kilowatt capacity each and one of 10 kilowatts. The steering gear built by the American Ship Building Co. is of standard type, direct geared to quad-

rant, with shaft and beveled gear transmission to wheel stand forward. The transmission shaft is run in roller bearings in a grease bath. Anchor chain is of 2 $\frac{3}{4}$ -inch diameter cast steel stud link type made by the National Malleable Co. The windlass is of the spur gear type and has

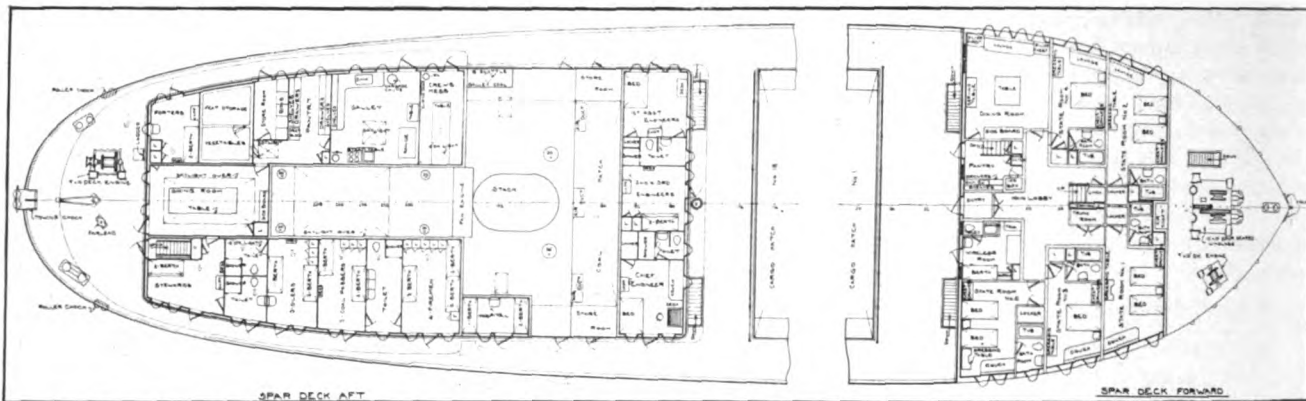
GENERAL ARRANGEMENT  
OF  
BULK LAKE FREIGHTER  
HULL NO 798  
BUILT BY THE AMERICAN SHIPBUILDING CO.  
CLEVELAND OHIO C.W. JULY 1927  
SCALE 1/16" AND 1/8" = 1 FOOT

#### MACHINERY

TRIPLE EXPANSION ENGINE  
25 $\frac{1}{2}$  x 41-67 x 42 STROKE  
THREE WATER TUBE BANDW BOILERS  
215 $\frac{1}{2}$  PRESSURE



FRIGHTER, RECENTLY COMPLETED FOR THE INTERLAKE STEAMSHIP CO. BY THE AMERICAN SHIP BUILDING CO.



GENERAL ARRANGEMENT OF CREW'S QUARTERS ON SPAR DECK AFT AND OF GUEST ROOMS ON SAME DECK FORWARD

steel cut gears throughout.

Deck winches or engines as they are called are 9 x 10 inches in size of a new design especially prepared for this

of the deck auxiliaries were made by the American Ship Building Co.

Forward of the engine room are located three Babcock & Wilcox ma-

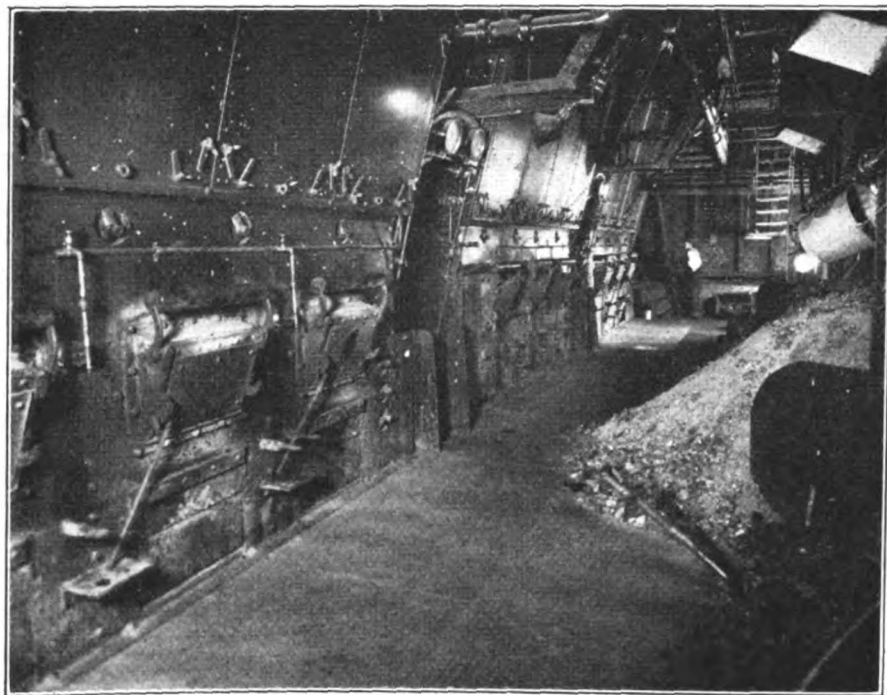
square feet. The boilers have been designed for superheat of 50 degrees Fahr., and a working pressure of 215 pounds per square inch. Four-inch tubes are used. A total of 191 square feet of grate surface is fitted with Aetna shaking grate bars. Induced draft is supplied by a fan driven by a double engine of American Ship Building Co. make, located above the breeching. No heated air is used.

Ordinary water is stored in two horizontal steel tanks each of 6000 gallons capacity, located in the dark hold. These tanks are fitted with an electric alarm to indicate water levels. A suction is carried aft to the sanitary pump which conveys water both hot and cold under 40 pounds pressure to all galleys, wash-basins, tubs, sinks, etc., throughout the ship.

#### Large Capacity Ballast System

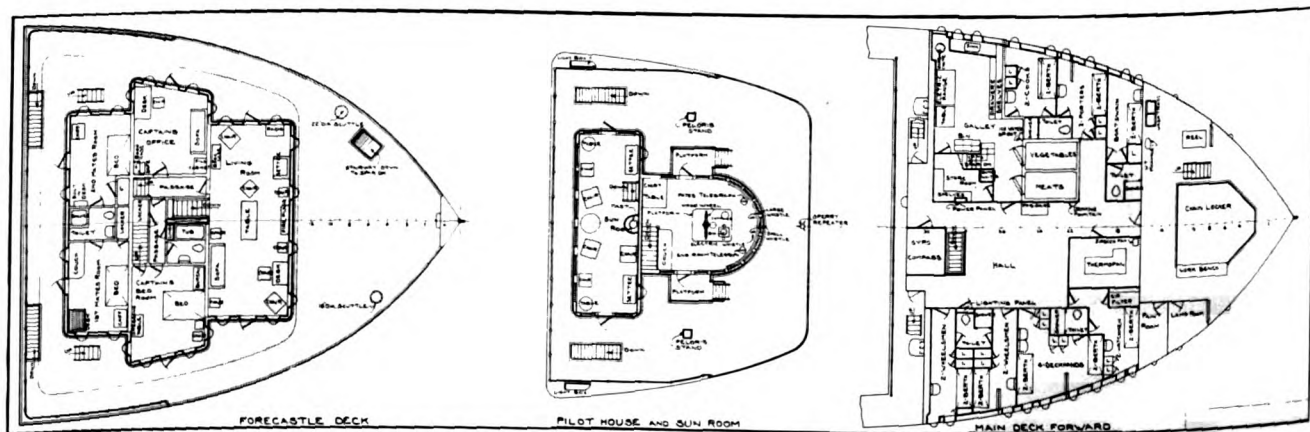
The drinking water is purified by a Grisco-Russell still and is piped through a cold storage tank to fountain and galley aft and also to the forward galley and other outlets forward. Both the sanitary and drinking systems meet all the latest requirements of the United States health department.

In a vessel of this type the ballast system is of primary importance and must be of large capacity. It is necessary to be able to empty the bal-



BOILER ROOM OF THE S. S. HARRY COULBY—THREE BABCOCK & WILCOX WATER TUBE BOILERS

steamer. These engines have cut rine type water tube boilers set fore and aft. The total heating surface of the standard double type 6 x 6 of the three boilers is 9345 square feet inches in size, compound geared. All and the superheater surface is 750



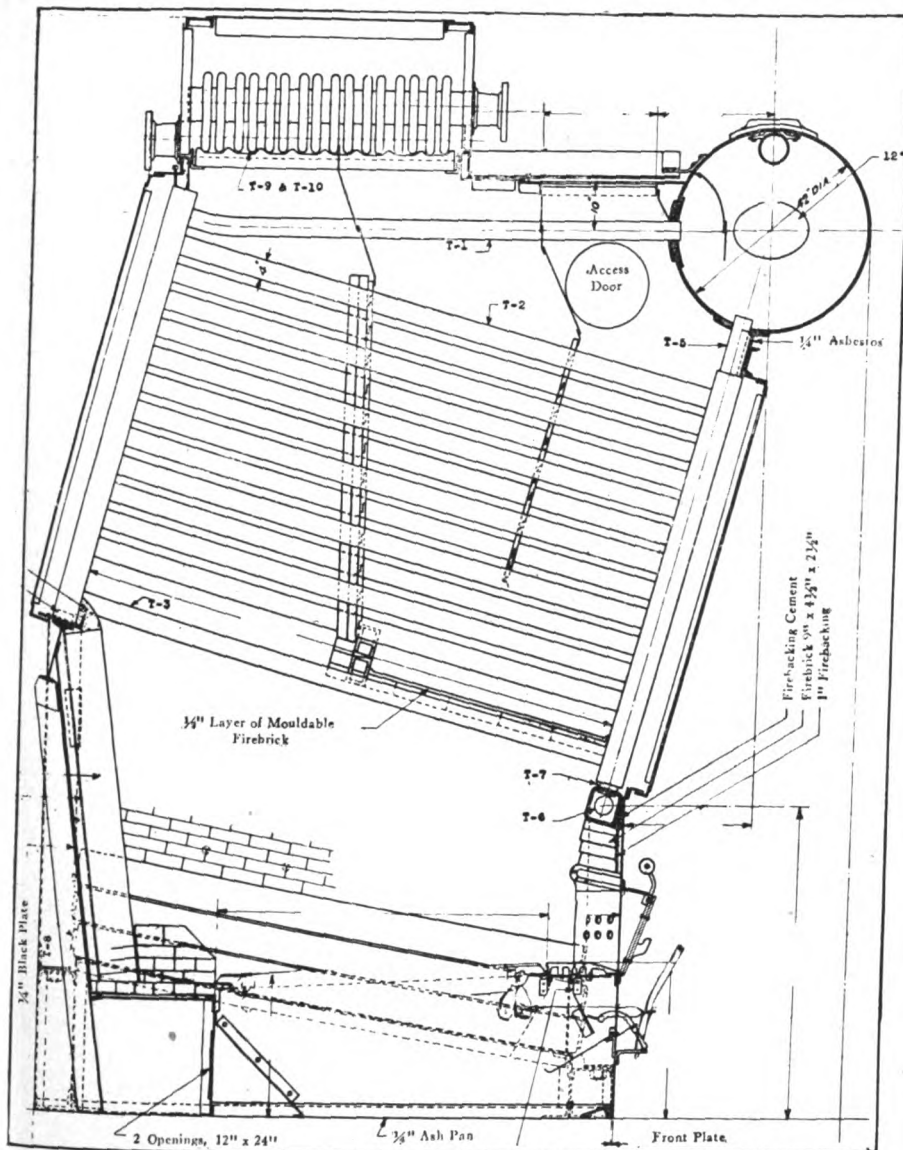
GENERAL ARRANGEMENT OF LIVING SPACES—FORECASTLE, PILOT HOUSE AND MAIN DECK FORWARD ON S. S. HARRY COULBY



last tanks in as brief a period as possible. For this purpose on the S. S. HARRY COULBY two main ballast pumps, of centrifugal type with 15-inch suction, each direct connected to compound vertical engines 8 x 14 x 10 inches have been fitted. These pumps were made by the Morris Machine Works. They operate at 275 revolutions per minute and each pump will deliver 8000 gallons per minute at a 30-foot head. In addition to these centrifugal pumps there are two hori-

to friction in long pipes and time lost in drainage the working time will probably be nearer 180 minutes or 3 hours. This is on the assumption that the tanks are filled to their total capacity which is an unusual condition.

For mechanical ejection of ashes two 5-inch ash guns of hydraulic type are used, one located on each side of the fire room. No boiler water purifiers are required as the COULBY is fitted with a surface condenser.



CROSS SECTION FORE AND AFT THROUGH ONE OF THE THREE BABCOCK & WILCOX WATER TUBE BOILERS ON THE S. S. HARRY COULBY

zontal duplex steam pumps 10 x 14 x 16 inches which are capable of each delivering 1400 gallons per minute. These pumps were built by the Warren Steam Pump Co. The combined capacity of the four pumps is 18,800 gallons, or 78 tons per minute.

Including the fore peak the total water ballast capacity is 9003 short tons. From the pump capacities noted above this ballast could be discharged in about 116 minutes but due

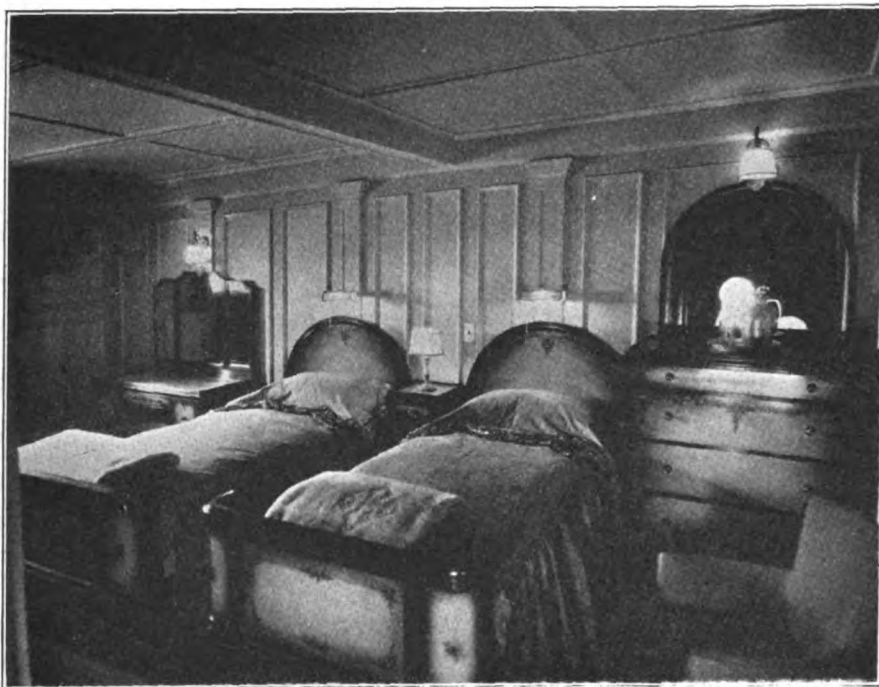
In order to try to comply with regulations prohibiting the smoke nuisance the boilers have been fitted with patented smoke consumers of the Barkers instant flame type as designed and built by the Canton Combustion Co.

All hot water drains are piped to a feed and filter tank of latest design, installed in the engine room high up on a stringer plate. In the layout of the engine room special thought was given to the conservation of heat

LOADING SCALE		
DEADWEIGHT TONS AT 2000 LBS	DRAFT	DEADWEIGHT TONS AT 2240 LBS
18000	XXII	16000
17500		15500
17000	XXI	15000
16500		14500
16000	XX	14000
15500		13500
15000	XIX	13000
14500		12500
14000	XVIII	12000
13500		11500
13000	XVII	11000
12500		10500
12000	XVI	10000
11500		9500
11000	XV	9000
10500		8500
10000	XIV	8000
9500		7500
9000	XIII	7000
8500		6500
8000	XII	6000
7500		5500
7000	XI	5000
6500		4500
6000	X	4000
5500		3500
5000	IX	3000
4500		2500
4000	VIII	2000
3500		1500
3000	VII	1000
2500		500
2000	VI	0
1500		
1000		
500		
0		

5'-9" EVEN KEEL

LOADING SCALE S. S. HARRY COULBY



ONE OF THE FIVE GUEST STATEROOMS ON THE S. S. HARRY COULBY

by returning as much as possible of it to the boilers. Auxiliary machinery is operated under superheat and exhausts can be led either to the main condenser or through the feed water heater. In port, exhaust from the main engine can be cut out so that auxiliaries can exhaust into the main condenser. Charles E. Collins, fleet engineer for the owner, has supervised all engineering details and he is responsible in collaboration with J. C. Workman, and Mr. Turner respectively, chief engineer and assistant chief engineer of the American Ship Building Co., for the results attained.

#### Elaborate Guest Accommodations

Never before has any lake vessel equalled the HARRY COULBY in the completeness, spaciousness, and sumptuousness of finish and furnishings, of accommodations. Her guest passenger quarters are without qualification equal to the finest suites on modern liners. This vessel may therefore properly and proudly take her place as the flagship of the second largest fleet on the Great Lakes. The accompanying illustrations can not do justice to the results achieved by the Raphael Studios Inc., New York, under whose direction the furnishings and decorations were carried out. Credit is also due Henry Gielow Inc. who collaborated with A. W. Cross, naval architect, and his staff of the American Ship Building Co., in the layout and general design of all quarters up to the point where the artist could begin his scheme for decorations and furnishings.

Not only in her guest passenger quarters more about which will be

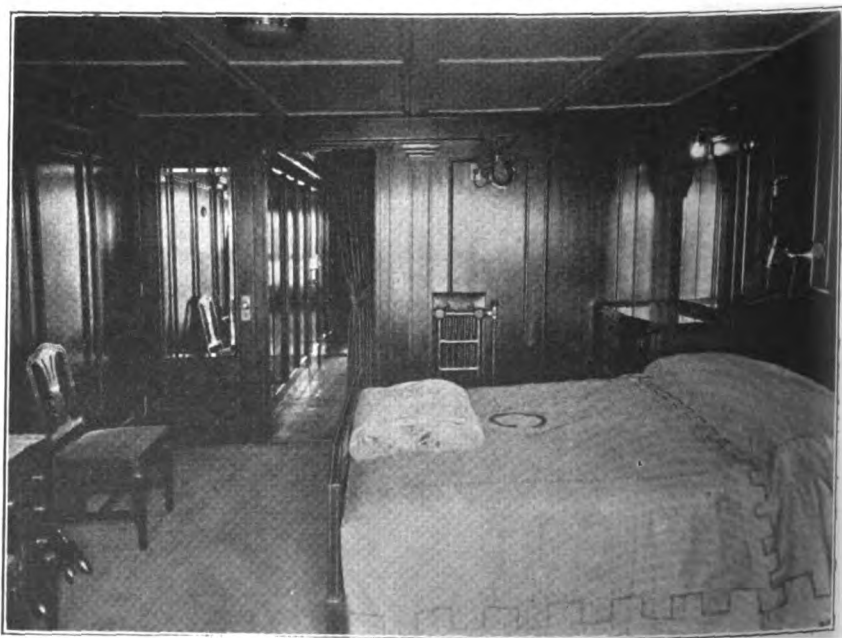
given later is the COULBY's accommodations of the finest. Officers and crew's quarters are particularly spacious and well equipped. The engineers are housed on the after deck forward of the bunks. General arrangement of their quarters are shown in one of the accompanying illustrations. On the center of the ship aft is located the officers' dining room. In proximity to this dining room are the refrigerators, store room, pantry, galley and crew's mess room, all on the port side. The firemen, coal passers, oilers, cooks and the hospital are quartered on the starboard side. At the after end of the deck house is located the main stairway to the engine room. In the

fan tail are rooms for laundry, toilets and engineer's stores. In this space is also located the steering engine and a large machine shop fitted with motor driven machine tools such as a drill press, lathe, shaper, grinding wheels and saw.

#### Deck Crew Located Forward

The deck crew is located in quarters on the main deck forward. These quarters are well ventilated and of large size. Accommodations for deck officers are also located forward arranged as shown on one of the accompanying plans. These quarters are located in a large texas built on the forecastle deck. In the forward end of the texas is located the guests' living room. The captain's quarters consist of bed room, office and tiled bath. A passage connects the bed room and office. Both of these rooms are paneled in mahogany giving a very rich and comfortable appearance to these spacious rooms. The first and second mates have separate rooms at the after end of the texas, with bath room between. These rooms are finished in quartered oak.

A large pilot house is fitted on top of the texas, with a sun room as a part of the guests' accommodations immediately aft. The pilot house is equipped with a Sperry gyro compass, radio direction finder of Radio corporation make, electric telegraphs to the engine room, a German invention and supplied by Th. Goldschmidt Corp., also mate's mechanical telegraphs of Chas. Cory & Sons make and the controls for the electric whistle. There are two peloris stands, outside of the pilot house, one on each side. There is also a Sperry repeater compass. A Negus magnetic



CAPTAIN'S STATEROOM ON THE S. S. HARRY COULBY

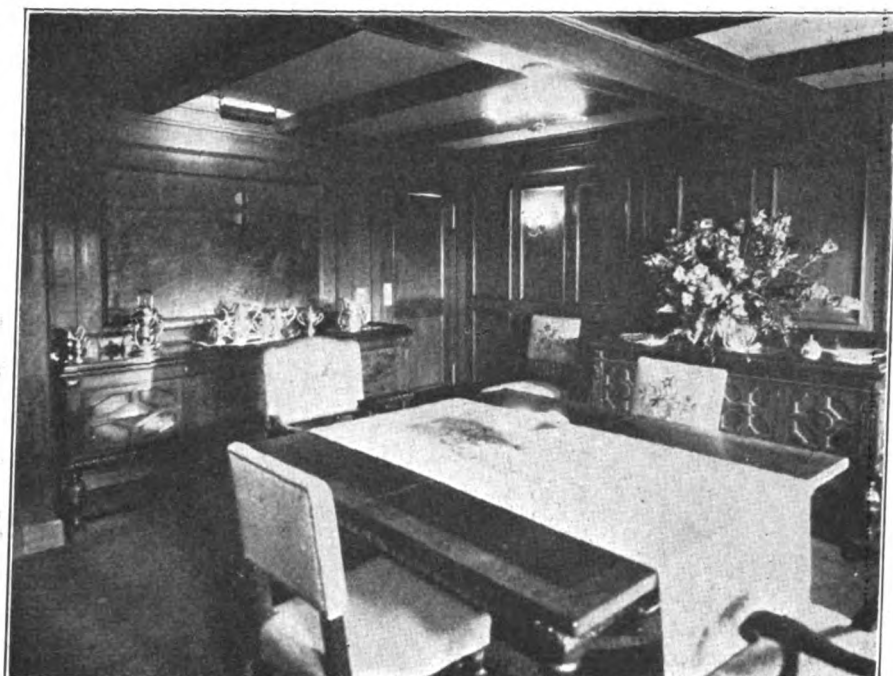


compass and binnacle stand are located in the pilot house. The vessel is fitted with wireless supplied by the Radio corporation. Room for the wireless is located in the after end of the forecastle on the spar deck and is finished in mahogany. This room has been sound proofed according to latest methods with acoustic felt and sheet metal. No noises are transmitted to the surrounding rooms.

#### Arrangement of Forward Spaces

Coming to the guest passenger accommodations on this vessel it may be well first to consider the number and arrangement of decks in the forward end. The lowest deck is the so called main deck which is really a sort of orlop deck. On this deck is located the deck crew and cooks and attendants for the guest quarters. The galley for the passenger accommodations is located on this deck on the port side. It is fitted with an electric range of Standard Electric Stove Co. type. There is the usual assortment of galley equipment and shelves and cupboards. A rubber tiled floor is laid on the steel deck. A large cold storage space off the galley is fitted with meat and vegetable compartments. Refrigeration is furnished by a Frigidaire machine. There is an automatic control of the temperature.

The deck above, called the spar deck, is, with the exception of the windlass and wireless rooms, entirely taken up with guest passenger accommodations. A hallway on the center line with door leading out connects with a vestibule which is a part of the main lobby of the guests' accommodations. Opening off this



GUEST DINING ROOM ON S. S. HARRY COULBY—PANELED IN TEAK WITH WAX FINISH

lobby are five staterooms and the dining room.

#### Five Staterooms With Baths

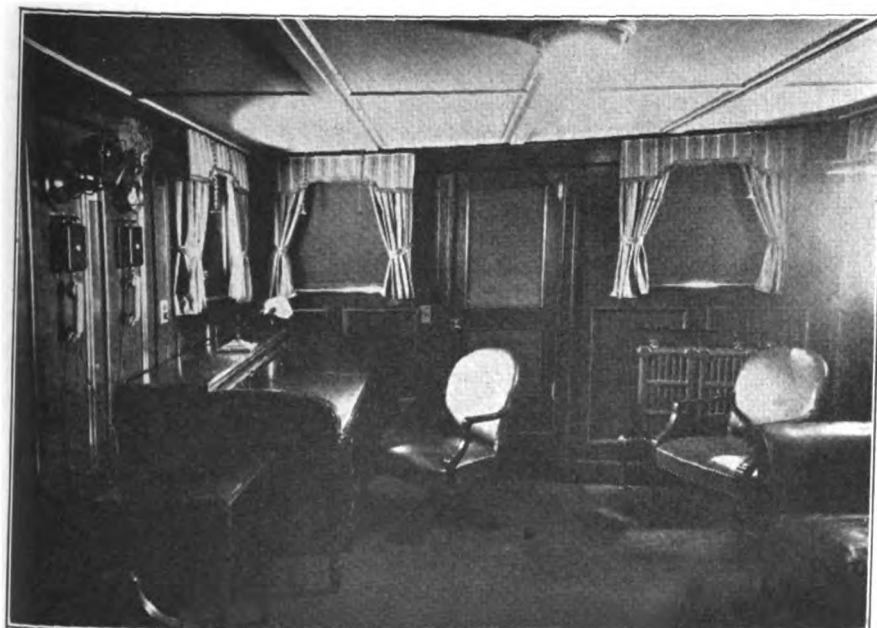
Accompanying illustrations will give an idea of the arrangement and furnishings of these staterooms and of the dining room. Each stateroom is fitted with a tiled bath and equipped with the best plumbing fixtures. The staterooms are paneled with Haskellite and moldings and the finish is in tinted enamels. The dining room is on the starboard and after side and is beautifully finished in Burmah teakwood in its natural state, rubbed down and waxed. The ceiling is of the beam type and there are built-

in silver cabinets and an upholstered settee. A butler's pantry finished in quartered oak is located adjacent to the dining room inboard and is fitted with a sink, cabinets for glasses and dishes, various lockers and a large day refrigerator with coils operated from the refrigerating machine below.

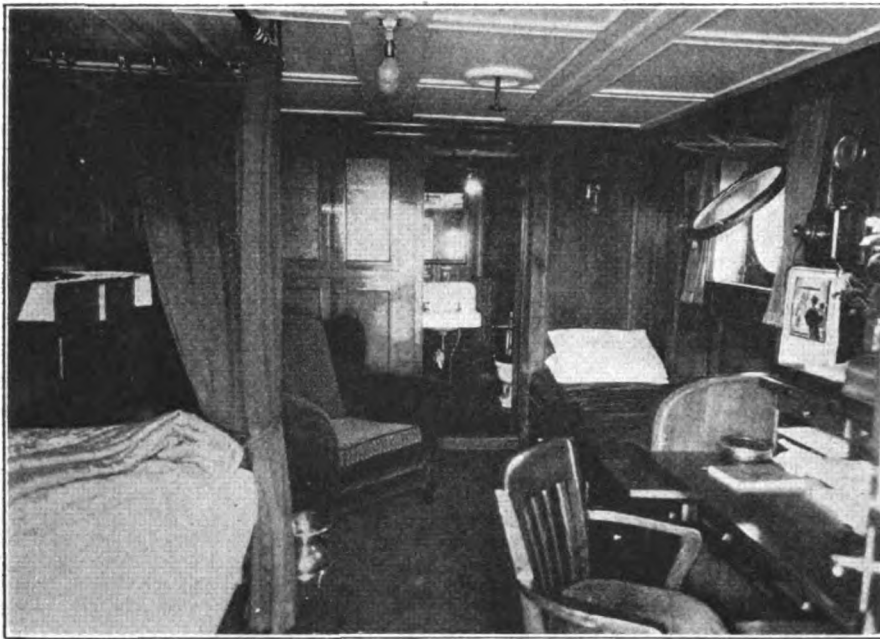
Now going to the deck above which is the forecastle deck. A stairway leads up from the main passengers' lobby on the spar deck to this deck and to the living room which is located immediately forward of the captain's suite. This living room has been beautifully decorated and furnished and would do justice to the finest home or ocean liner. It is paneled in French walnut and has a beam ceiling. An electric fireplace adds an atmosphere of homelike comfort. The remainder of the space in the house on this deck is occupied as mentioned above by the captain's and mates' quarters.

#### Guests' Sun Parlor

On the next deck above, which is the top of the house on the fore-castle deck, is located the guests' sun parlor immediately aft of the pilot house. This sun room is an open air veranda fitted with large windows closely spaced. These windows may be readily operated somewhat similarly to that of automobile door windows. They are fitted with a lever operating gear and were supplied by the Kearfott Engineering Co. A stairway leads from the sun room down to a passage leading to the living room. Access may be had from the living quarters to all parts



CAPTAIN'S OFFICE ON THE S. S. HARRY COULBY



CHIEF ENGINEER'S OFFICE AND STATEROOM ON THE S. S. HARRY COULBY

of the guests' quarters without having to go outside.

Throughout the guests' accommodations all of the furniture was designed and built for its particular place. Also all hangings' carpets and other fittings were selected and made to fit into the general color scheme. All of the living rooms in the forward quarters are artificially ventilated with cooled and filtered air.

An intake is fitted through the side of the pilot house through which fresh air is drawn down through an air filter, passed through a Thermo-fan and then distributed to the various rooms. The Thermo-fan is fitted with coils through which cooling water is circulated.

A gangway door is fitted on each side at the after end of the fore-castle. These doors are provided with

ash gratings and are hinged at the bottom so that they fold outboard and thus become platforms. Stanchions and hand ropes are provided and also telescoping gangways with rubber treads, hand ropes and stanchions, extending from each platform down to the deck. These gangways are supported by bridles and davits. It is thus possible for the owner's guests to come on board, enter the lobby and have access to staterooms, dining room, living room and sun room without the necessity of going out on deck. The guest accommodations are therefore isolated from other quarters.

The S. S. HARRY COULBY at the time of this writing had already completed her round trip maiden voyage from Lorain, O. to the head of Lake Superior with coal and return with 13,731 tons of ore for Conneaut, O. On this initial trip she had as the first occupants of these fine quarters, Mr. Harry Coulby and guests.

William A. Reed, one of the leading captains of the large Inter-lake fleet is master and one of the oldest engineers in point of service, James Brand is her chief engineer. W. G. Stewart, general superintendent of the company, has been throughout directly responsible to the owner for planning and supervising the construction of this newest, largest and most elaborately appointed lake freighter.

## A Program to Get the Government Out of the Shipping Business

**A** MOTORSHIP propelled by diesel engines requires only one-half to one-third of the fuel consumed by comparable steam vessels. During the last fifteen years marine diesel engines have been rapidly adopted in place of steam propelling equipment for vessels throughout the world, until today, according to Lloyd's latest report, the tonnage of motorships under construction (including conversions) exceeds that of steam vessels.

Throughout the world there are at present under construction 297 motorships totaling 1,860,000 gross tons (including conversions); 28 well-known foreign ship owners have fleets totaling 312 vessels (completed or on order) of which 279 are motorships—18 of these 28 firms operating motorships exclusively and 12 operating fleets of between 10 and 25 motorships. *Motorship*, published in London, issue of July, 1927, gives full information on the foregoing.

After giving effect to the present

new diesel engine conversion program, the shipping board, with upward of 700 vessels, will have only between 25 and 30 motorships in 1928.

An adequate privately owned merchant marine is absolutely necessary for the country's welfare. More than any other nation of the world, the United States with its higher standard of living and higher capital cost of ships, must seek lowest operating cost of vessels in order to compete with foreign shipping.

### Gain in Economy by Dieselization

A fleet of at least 250 economical motorships would be the strongest support which could be given to our struggling American merchant marine. The government has done much in building up our ocean trade routes to Africa, South America, Australia and the Orient; it has also contributed some hardship to private owners by being in the business and subjecting such private owners to the competition of governmental operation at loss.

In order for the government to get out of the shipping business it must dispose of its present large fleet of ships. It has been unable to dispose of a large number of these hulls as steamers. It is not reasonable to scrap this fleet of ships—many of which are well built and have never been to sea—although it is true these one-purpose war-built vessels do not meet present day exact requirements of private owners for various special ship purposes, trades, and services.

If 250 of the best shipping board vessels, with respect to type and condition, were converted, over a period of several years, to economical motorships, it is submitted that the following would be accomplished:

(1) Ultimately provide for sale to private owners modernized economical motorships that could be successfully operated in competition with European motorships;

(2) Reduce the operating losses of the shipping board for a further period of governmental operation, during the development of long trade routes to Africa, South America, Australia, and



the Orient, thus establishing these lines on profitable basis, with motorships;

(3) Solve the problem of getting the government out of the shipping business by modernizing the best hulls against a date, say five years hence, when the motorships would be sold at such a favorable price to private owners as would promise successful operation under the American flag, with proper covering guarantees—the remaining steam vessels to be scrapped or held subject to charter by private operators to meet emergency demands;

(4) Provide immediate and adequate work for our shipyards to tide over the interval until further naval limitation conferences shall decide to what extent these yards are necessary for our future navy requirements;

(5) Reduce the unit cost of conversion of steamers to motorships by permitting quantity production and standardization of hull alterations to suit a considerable number of the same type of engine;

(6) Encourage immediate plans for construction of new replacement passenger and freight ships by private owners by:

(a) The government setting a definite date, say five years hence, on or before which date it would withdraw from shipping operations.

(b) The passage of legislation granting in addition to mail subsidies—loans at government interest rates for terms of 25 years to private parties undertaking the building and operation of new ships meeting the navy's war-time auxiliary requirements, and subject to government taking-over in war emergency.

It is difficult to induce private capital to enter the shipping business as long as the government remains a competitor, able and willing to operate at a loss. If, therefore, combined with the foregoing program, a definite time

could be set by the government for getting out of the shipping business, disposing of the larger and best part of its fleet as converted motorships to the highest bidder and at a low price commensurate with the then age of the ships, the balance of the fleet, consisting of the poorest hulls then upwards of 15 years old, could be scrapped or placed at the disposal of private owners for reserve shipping capacity available on charter.

Such a program would provide a definite plan to get the government out of business and offset the published opposition to the government's program for embarking on a shipbuilding venture which would cost in excess of the cost of converting 250 steamers to motorships and result in getting the government deeper in the shipping business.

## Shipbuilding on Lakes Shows Profit

**A**MONG all the dismal reports one hears of the deplorable state of shipbuilding, and they are by and large quite justified by the facts, it is particularly refreshing to note from the twenty-eighth annual report of the American Ship Building Co., for the fiscal year ending June 30, 1927, that there is one shipyard in the country at least whose operations for the year shows a real substantial profit.

A. G. Smith, who has risen from the ranks in the company to become its president, said to the writer in connection with the favorable showing made, "We have been fortunate." But the fact remains that with a considerable volume of new work and the ordinary amount of repair work during the past year the American Ship Building Co.'s personnel and plant equipment were efficiently organized and the work was carried through with a minimum of waste in time of labor and material, to make this profitable showing possible. The men and management both, of the American Ship Building Co. deserve credit for these good results.

### A Profitable Year

Mr. Smith's report to stockholders dated Sept. 7 shows that the net profit for the year ending June 30, 1927 was \$1,747,373.51. Divided by the number of shares of common stock, the earnings are equivalent to \$11.50 per share after of course, deducting the 7 per cent dividends on the comparatively small amount of preferred stock. Earnings the year before were at the rate of \$7.44 a

share, and the annual average earnings for the last ten years ending with 1926 is \$12.90 a share.

Of the earnings during the last fiscal year \$1,222,970 were paid out in dividends and \$524,403.51 were added to the surplus account. The surplus for June 30, 1927 is \$6,407,772.97. The balance sheet of the company shows among other assets

30, 1927 was largely due to the volume of business in contracts for new tonnage. The volume of repairs and profits from this source were comparatively normal. The new tonnage constructed by the company during this period comprises, five bulk freight steamers, one large bulk unloader all of 600 feet in length or over, and one tug.

It was pointed out in the report that contracts have been closed for the construction of two oil tankers for operation on the Great Lakes, delivery to be made during the spring and summer of 1928. Two non-self propelled oil carrying barges were recently completed for the Standard Oil Co. of New York for use in New York harbor and vicinity.

### Some Interest In New Ships

Though nothing very definite seems to be in sight, Mr. Smith reported that there is some interest in additional new tonnage, that is, based on the requests made to submit proposals. After certain repairs there are now in working order three building berths at the Lorain, O. yard.

Another interesting feature of the report covers the sale of the remaining eight type eleven ships and that the price obtained exceeded the book value at which they were held June 30, 1926 by \$59,382.81. All of these ships had of course been sacrificed as far as their original cost is concerned.

Facilities the report indicates have been improved at Lorain, Chicago and Buffalo. When the work at South Chicago yard is completed all the active properties of the company will be in first class condition.



A. G. Smith

President American Ship Building Co.

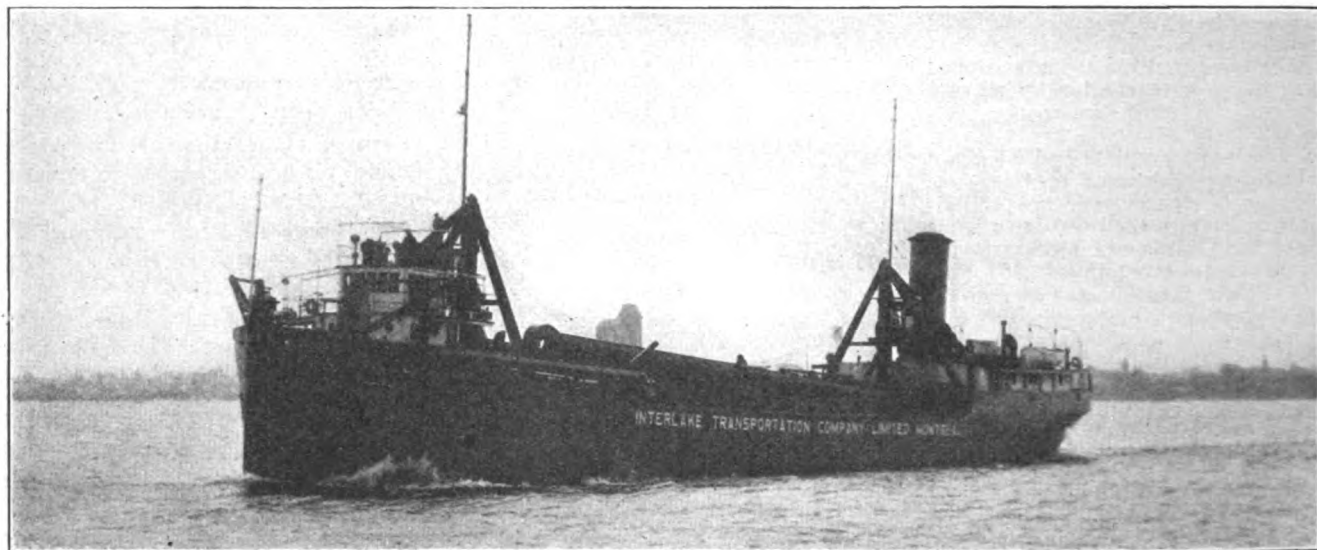
\$7,611,078 in United States government securities at par value and accrued interest.

In his report Mr. Smith pointed out that the favorable conditions shown in earnings in the year ending June

MARINE REVIEW—October, 1927

# Modern Sand Vessel Completed

Canadian Shipyard at Collingwood Builds Unique Self-Loading and Unloading Steamship for Great Lakes Sand and Gravel Trade



*Self-Loading and Self-Unloading Sand and Gravel Steamer, Sand Merchant, on Trials, Sept. 3, 1927, off Collingwood, Ont.*

**A** SELF-LOADING and self-unloading sand and gravel steamship, christened **SAND MERCHANT** and considered the last word in ships of her class, has just been built and engined by Collingwood Shipyards, Ltd., Collingwood, Ont., Canada, for the Interlake Transportation Co., Ltd., Montreal.

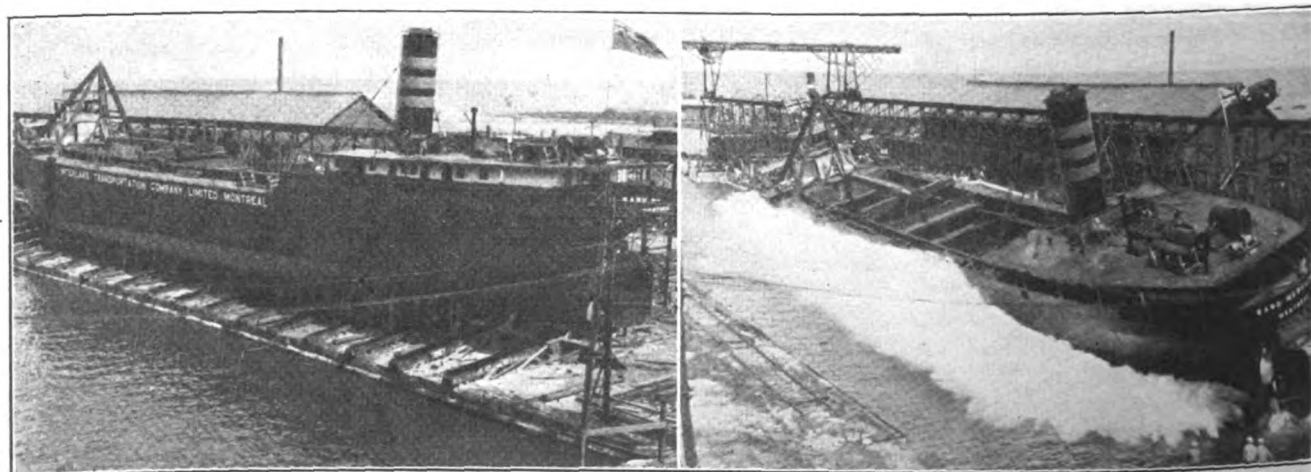
The principal dimensions of the **SAND MERCHANT** are: Length overall, 259 feet 9 inches; length between perpendiculars, 252 feet; breadth molded, 43 feet 6 inches; depth molded, 20 feet; deadweight on canal draft 14 feet, about 2300 tons. The contract was signed on March 12, the keel was laid April 28 and the vessel was delivered ready for sea on Sept.

7, the time for construction being a little over four months.

The **SAND MERCHANT** is of single deck type with sunk forecastle and raised quarter deck. There are six transverse watertight bulkheads. Cargo is carried in two hopper sided holds amidships. Immediately abaft the cargo holds is a room for machinery for operating the after derrick; and forward of the cargo holds is another machinery room containing the cargo pumps and engines for operating the forward derrick. The propelling machinery is in the after end of the ship, and the coal bunkers are abreast of the boiler room. Water ballast is carried in the forward and after peaks, also in the double bottom under

the cargo spaces and engine and boiler room. Wing spaces in way of cargo holds are also fitted for the carriage of water ballast.

Sand and gravel are pumped from the bottom of the lake through 18-inch diameter steel pipes by two 18-inch centrifugal pumps specially constructed for this purpose. These discharge into double steel troughs on each side of vessel, arranged one over the other. By means of various sizes of screens and by cover plates, sand or any desired size of gravel may be screened and discharged into holds, the residue being carried either over the ships side or through spillways through the bottom of the ship. Cargo is discharged by two swinging stiff



**SELF-LOADING AND SELF-UNLOADING SAND AND GRAVEL STEAMER, SAND MERCHANT, BUILT BY THE COLLINGWOOD SHIPYARDS LTD. FOR THE INTERLAKE TRANSPORTATION CO. LTD.—TAKEN AUG. 17, 1927—SHOWING THE VESSEL JUST BEFORE AND DURING LAUNCHING**



leg derricks each equipped with a two yard grab bucket.

Each derrick is operated by a swinging engine, a boom hoist and a two drum grab engine, these engines are controlled by one operator from a cab built in the derrick framing. A crew of 26 men including derrick operators, will be carried.

The accommodation is of a high class for this type of ship. The dining room, captain's and chief en-

gineer's quarters are panelled in oak. Hot and cold running water is supplied to each room, and all quarters are steam heated. Electric light is fitted throughout. A one ton ammonia refrigerating plant has been installed.

The vessel is propelled by one triple expansion surface condensing engine having cylinders 15½-inch, 26-inch and 44-inch diameter with 26-inch stroke. Steam is supplied, by two scotch marine boilers each 13 feet in

diameter and 11 feet long, under natural draft and a working pressure of 200 pounds. The vessel is intended for service on Lake Erie and will carry sand and gravel from the Canadian side to American ports.

On the trial run, Sept. 1 the SAND MERCHANT on a draft of 12 feet 8 inches aft and 7 feet 9 inches forward, maintained a mean speed of 10.42 knots and a speed of over 10 knots loaded is anticipated.

## Launch Self-Unloading Cement Vessel

THE Huron Portland Cement Co., Detroit, added another ship to its fleet of bulk cement carriers on July 7, when the S. T. CRAPO, the largest and most modern self-unloading bulk cement carrier on the Great Lakes, was launched at the yard of Great Lakes Engineering Works at Ecorse, Mich., on the Detroit river. This new steel bulk cement carrier has a capacity of 7500 tons, equivalent to 160,000 sacks of cement.

A pioneer in transportation of bulk cement on the Great Lakes, the unique mechanical equipment of this vessel was built from designs by the Huron company's engineers. Many of the special mechanical features are patented by the company. Herbert C. Sadler, professor of naval architecture and marine engineering at the University of Michigan, acted as consulting naval architect.

The S. T. CRAPO joins the JOHN W. BOARDMAN and SAMUEL MITCHELL, other self-unloaders of the Huron Transportation Co., the vessel operating subsidiary of the Huron Portland Cement Co., and will be employed exclusively in transporting cement for the company's plants at Alpena, Detroit and Wyandotte, Mich., Duluth, Minn., Milwaukee, Wis., Cleveland, and Buffalo.

In hull dimensions, the new steamer is 400 feet long, has a depth of hold of 29 feet and is 60 feet wide. Three scotch marine boilers and a 2000 horsepower triple expansion engine will give a running speed of 13 miles per hour. The electrical equipment includes three turbo generators. The cost complete exceeded \$1,000,000. A crew of 35 men is required when she is in operation.

Her unique mechanical equipment enables the new ship to unload a capacity cargo equivalent to 160,000 sacks of Portland cement in 10 hours without aid of any unloading machinery on the docks. A capacity load can be taken on in four hours.

One of the interesting and unusual

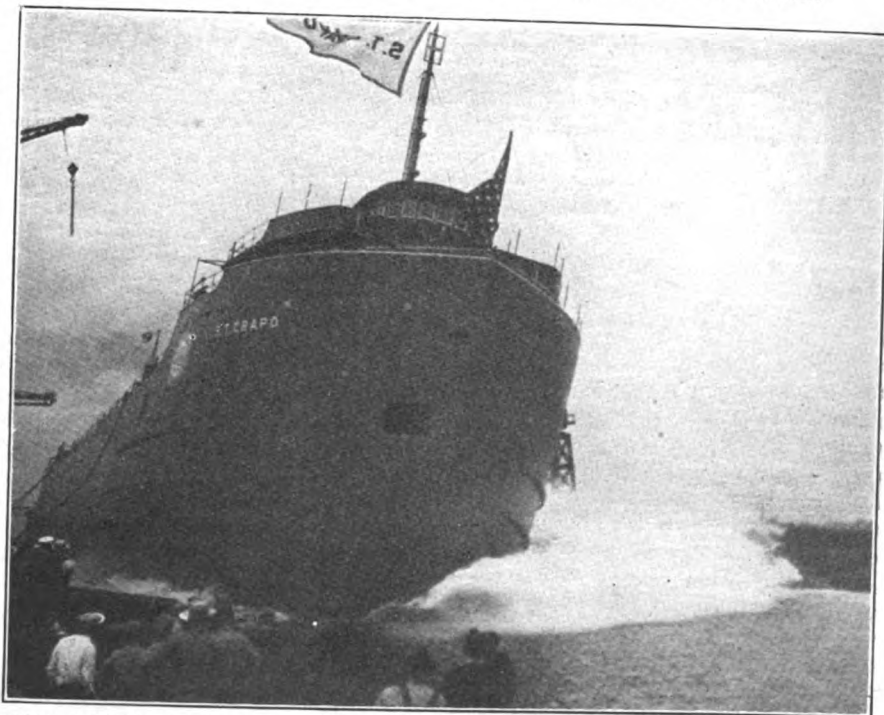
features of the launching of the CRAPO was the fact that smoke issued from her stack and a blast from her own whistle answered the salutes of steamers in the vicinity as she slid down the ways into the water. Credit is due the Great Lakes Engineering Works for the efficient manner in which the difficult job of building the vessel was carried out.

A passenger steamer, the WAUKETA, was chartered exclusively by the Huron Portland Cement Co. to privately conduct the launching party of 600 invited guests to the shipyard. Promptly after the arrival of the party at the shipyard on the Detroit river the new steamer was successfully launched.

Miss Anita Boardman, daughter of John W. Boardman, vice president of the Huron Portland Cement Co. christened the S. T. CRAPO, named after Stanford T. Crapo, secretary-treasurer of the company. The

christening party included John B. Ford, president of the Huron Portland Cement Co., John B. Ford Jr., Fred Ford, John W. Boardman, W. W. Crapo, son of S. T. Crapo, and Paul H. Townsend, connected with the Huron company, also W. B. Mayo and E. G. Liebold of the Ford Motor Co. A number of guests were present from various sections of Michigan and adjoining states, among whom were B. F. Affleck, president of the Universal Portland Cement Co., and George S. Bartlett of the Universal company, Chicago, and Wm. M. Kinney, general manager of the Portland Cement association.

Following the launching, luncheon was served to the guests on board the WAUKETA and the party was taken to the company's private dock at Wyandotte, Mich., for an inspection of the new Wyandotte cement manufacturing plant before the return trip to the docks at Detroit.



THE HURON PORTLAND CEMENT CO.'S NEW SELF UNLOADING BULK CEMENT CARRIER S. T. CRAPO LAUNCHED JULY 7 AT THE GREAT LAKES ENGINEERING WORKS, DETROIT

# Reduce Injuries on Shipboard

Methods Used to Prevent Personal Injuries on Board Lake Vessels  
Effective—Active Interest in Safety Stimulated by Committees of Men

BY MILTON D. McINTYRE

**I**N THE development and study of accident prevention, I think it is generally agreed that any organization which expects to secure satisfactory results in having its employees conduct operations with a minimum of personal injuries and loss of life, must realize that safety work, both ashore and on shipboard, occupies a distinct and important place in its affairs.

It is essential that the chief executive be sincere and in entire sympathy with accident prevention, and interested in having his officials devote time and vigorous effort to that work. He should know that the real and directing influence must come down from his office, and his attitude and safety policies be well known to all of the employees. He should be interested in learning the where, when, how and why of at least each serious or fatal accident that occurs to his employees. Mere authorization of expenditure for proper mechanical guards to make the operations safe, without active and earnest effort, is not alone sufficient. An unusual number of accidents, as shown by the record, should be viewed with as much concern as a rising cost statement, for it is pretty certain to indicate that somewhere down the line inefficiency exists in that organization. While his officials, and the employees under them, may do much on their own initiative, we can quite safely say that much more could and would be accomplished with active encouragement and genuine support from the chief executive.

Included in the various operations of our company, we have a fleet of 44 ships engaged in the carrying of bulk freight, ore, coal, limestone and grain, on the Great Lakes. Once a year all masters and chief engineers are called to headquarters of the company in Cleveland, for a conference, during which considerable time is given to the discussion of accident prevention. This conference closes with a banquet and snappy program

A paper presented at the Marine Section of the National Safety Council at the sixteenth annual Congress held at the New Stevens Hotel, Chicago, Sept. 26-30. The author, Milton D. McIntyre, is a member of the Staff of the Pickands, Mather Co. Cleveland, prominent Lake vessel operator. A list of other papers and preliminary account of the proposed activities of the congress appeared in the September MARINE REVIEW.

which promotes mutual acquaintance and co-operation. We have the same plan of ship's safety committees which was presented before our congress several years ago by Mr. Marr, of the Lake Carriers' association, which, briefly outlined, is as follows:

Six men, three from forward and three from after end, compose this committee, which always includes the lowest licensed men from the forward end and the engineer's department. (Boatswain and handy men are included if carried). The balance of the committee is selected by the master and chief engineer, from each end of the ship, no two to be of any one grade. One of the licensed men is appointed by the master to act as chairman, the other licensed man serving as secretary. Meetings are called by the master some time between the fifteenth and the last of each month. Both he and the chief engineer, however, attend only in an advisory capacity. They, as well as the members of the committee, sign the minutes indicating their attendance. Copies of the minutes are sent to the manager of the fleet and to the association.

Duties of the committee members are: Consideration of safety, instructions to new men, discussion of injuries occurring on other ships and, where they have authority to act, the carrying out through their respective departments of such steps as the committee finds advisable. Members who have not authority to act recommend that their superior officer give the matter necessary attention. Each member of the committee receives two dollars from the master at the end of the season for each meeting attended, and if no accident to any of the ship's crew requiring absence from the ship, has occurred during the season, a bonus of \$10 is paid from the office to each member of the committee who is still a member of the crew, and who has attended at least six meetings. Ship owners in this association report to it the nature of injury and description of accidents occurring on their ships, and brief resumes are sent monthly to all members so that there is excellent opportunity for keeping posted on the accidents and safety recommendations on the other fellows' ships.

In addition, the Lake Carriers asso-

ciation furnishes a code of recommendations prepared from the experience of all the vessels, covering the following points: Lights, hatches, hand rails and gratings, ladders, rigging, tackle, gear and stagings, machinery, valves, boilers, pipe lines, etc.; fire, cables, loading and unloading, life preservers, warnings, boat and fire drills and first aid.

We have found that safety meetings held by the men on shipboard are most effective in getting the safety idea over to the rank and file, and in keeping it alive. The number of ships in our fleet receiving the bonus has increased each year. In 1923, 22 per cent; in 1924, 30 per cent; in 1925, 47 per cent; in 1926, 70 per cent.

These monthly meetings create a certain contact between the management and the entire crew and tend to make the committee members feel a responsibility in keeping the ship's accident record clear. Soon after these meetings have been held, the crew inquire and hear what matters were discussed, and know that the company is interested in safety. I would like to read a few excerpts from the minutes of some of our vessels, as they are typical of the way in which our committees accept their responsibility.

"When back oiling coal bunker, see that all coal is off angle irons, and shelf pieces so that there will be no danger of accident."

"This ship has the distinction of not having a man leave on account of personal injury from accident since the fall of 1920. Let this committee watch their step and watch the action of others and advise new members of our crew when they ship, as to any danger that may confront them. Always bear in mind that it is the duty of this committee to advise and try to enforce the safety rules."

"Captain reminded us to keep people off the ship that have no business aboard, telling each member he has authority to keep strangers off boat, and it is his duty to find out a visitor's business and report to one of the officers, and he would handle the case as he saw fit."

"Captain attended meeting and required each member to relate some act he has done since last meeting



toward the promotion of safety."

"Warned shipmates to use ladder in coming aboard instead of walking up the mooring cable."

Our office deals directly with employees in handling all claims for injuries. All accident reports are carefully gone over by our fleet superintendent, and any accidents involving laxity in the enforcement of safety rules, lack of proper supervision or bad practices, are promptly discussed with the ship's officers, who know that a full explanation is going to be required.

While the committee system is helpful, it is not a complete panacea in preventing all injuries. Some men seem to be slow to know when they are in danger themselves or doing something that may injure others. We have found that injuries occur frequently when handling lines and cables. The men apparently misunderstand signals or neglect to use the becket, and fingers are caught between the spile and cable when the engine takes up on the cable. Quite a number of accidents happen when men run along the deck. Recently one of our sailors who was in a hurry to get back to supper, while running down the deck, slipped and severely injured his knee. The fire hold and engine room contribute to the shipboard injuries; clinkers get on firemen's ankles while cleaning fires;

coal passer neglects to have a blister taken care of and finally infection sets in; fingers damaged when oiling or feeling engine.

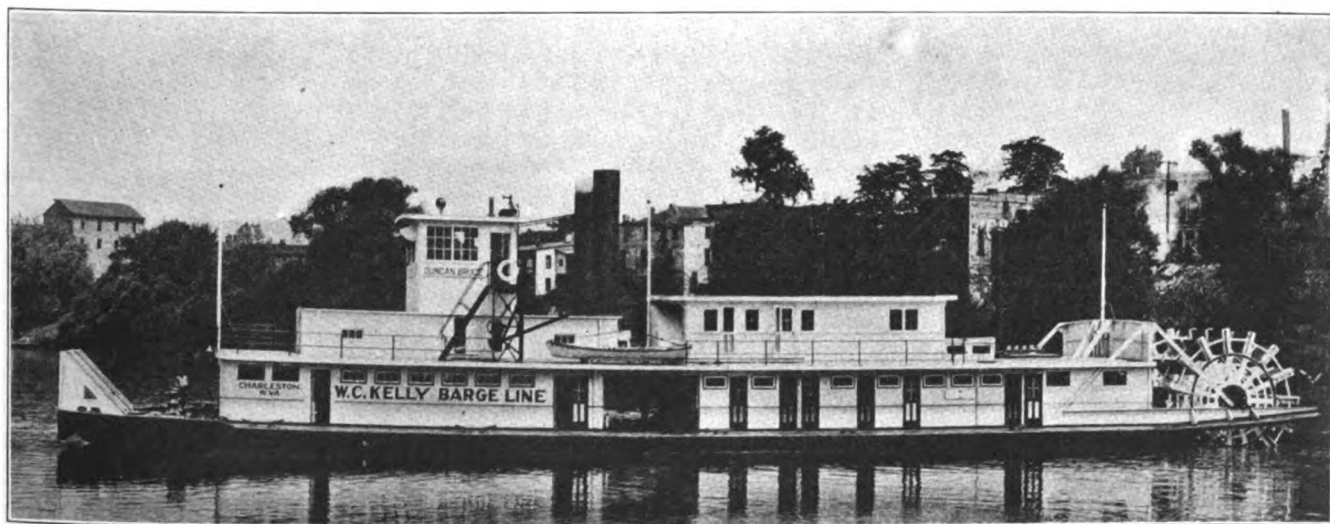
#### Compensation Should Include Seamen

We have been very insistent in keeping strangers and newsboys off our ships. Some time ago a newsboy, attempting to board one of the ships, fell from the ladder to the dock, quite severely injuring his hip. As a result, we have had to be very careful in keeping everybody off the ship who has no business aboard. Injuries have been quite frequent also on account of falls, such as slipping on an oily hatch cover, and slipping on the deck during a storm. Men have attempted to go aboard while intoxicated, and have fallen off the gangplank. We have also had instances where men in the same condition attempt to get aboard on the mooring line, which has not proven to be a very safe means of getting aboard. Accidents happen because material has been left where it should not have been causing injury when it fell from some upper place on the ship. Ladder accidents have been caused by slipping, barking shins, by not having a sure hold, or going down the ladder the wrong way. Not long ago a sailor was going ashore and went down and off a ladder which was about four feet from the

dock; he did not notice that it was not on the dock, and that the vessel was shifting along the dock.

As we all know, the United States longshoremen's and harbor workers' compensation act, effective since July 1, 1927, applies to employees, excepting seamen, injured on shipboard, and this will do away with the litigations which have heretofore been possible between employee and employer. The principle of compensation has now been well established and it is to be hoped that in the near future our congress will enact a fair compensation law which will include seamen and provide an equitable remedy to assure injured seamen and their dependents certain and sure relief. While they do receive medical service now, their injuries and misfortunes still expose them to a certain class of attorney who perhaps would not welcome a law which would take away a large source of income. When the state compensation acts began to operate, many employers seemed to show considerably more interest in accident prevention, but many industries always had given that work the attention it deserved. It is pleasant to realize that many ship owners have accepted their responsibility to their employees in seeing that anything possible and reasonable is done for their safety and freedom from accidents.

## Twin Diesels Drive Sternwheel Boat



Diesel stern-wheel tow boat DUNCAN BRUCE—Built by Charles Ward Engineering Works for W. C. Kelly Barge Line

**D**IESEL engine application to Western river boats is constantly growing. Only last month, what is said to be the largest and most powerful diesel driven sternwheel river towboat, the DUNCAN

BRUCE designed and built by the Charles Ward Engineering Works, Charleston, W. Va., was delivered to the owner, the W. C. Kelly Barge line, and entered the Pittsburgh-New Orleans service. This vessel is the

last of four diesel towboats, and 22 steel barges built by the Ward company for the Kelly interests. Her principal dimensions are: Length overall, 160 feet; length between perpendiculars, 135 feet; beam molded,

35 feet; beam overall, 36 feet; depth molded 6 feet; sheer forward and aft, 1 foot 6 inches and 6 inches respectively; draft aft, 4 feet 3 inches; draft forward with fuel tanks full 4 feet 8 inches.

The hull has a modified scow bow, long rake aft and is of unusually heavy construction much in excess of the American Bureau of Shipping requirements. Five longitudinal trusses and bulkheads provide excessive stiffness without the usual system of hog chains so common on Western river steamers. There are six water tight compartments. In four fuel oil tanks the total capacity is 20,000 gallons or enough for 400 hours continuous operation at full power, including auxiliaries and galley range.

The main deck house 27 feet wide by 117 feet long is of steel construction in two units separated by an open gangway 12 feet wide just aft of the engine room. The machinery space is 36 feet long and houses the entire power equipment. Forward of the machinery space are two rooms for general stores and a large locker for engineer's stores. Aft of the main gangway are quarters for a double crew, bathroom, linen locker, mess room, large galley, refrigerator and cold storage. The gear and tiller compartment are aft of the mess room and galley.

A large deck house on the upper deck has staterooms for the captain and radio operator with connecting bath. In this space are also luxurious quarters for the owner. The pilot house, of steel, 12 feet by 18 feet, is located above the engine room and contains the regulation power and hand steering levers and pilot wheel, engine room telegraphs, searchlight controls, switches, tell-tale boards and boards and last, but not least the beloved burnside stove—a necessary adjunct to all well regulated pilot houses, even though steam heated. A steel bridge on each side gives access to the pilot house and a secure anchorage for boat cranes of 3000 pounds capacity.

Propulsive power is supplied by two Fairbanks-Morse, six-cylinder, full diesel, solid injection, two cycle engines each developing 360 brake horsepower at 250 revolutions per minute. These engines are fitted with air oil operated clutches and are coupled direct to the reduction gears through line shafts 6 inches in diameter. The operation of the engine is so smooth and positive that the clutches are only used for warming up.

All auxiliaries, capstans and steering gear are electrically driven. Current is supplied by two four cylinder,

Hill diesel engines each direct connected to 18-kilowatt generators. A single cylinder diesel engine, belted to a 3-kilowatt generator, is used for stand-by service. Storage batteries of sufficient capacity to operate the steering gear in an emergency also provide current for lighting, water service, and refrigeration when the boat is in port. Hot and cold water is supplied by duplicate Fairbanks-Morse automatic service pumps. A Hyde electric steering gear is mounted on deck with limit switches located in the tiller room. Air and fresh water tanks of ample capacity are located below decks.

There are two stern wheels each 18 feet in diameter with 15 buckets. The wheels can be operated independently in either direction, which gives unusual maneuvering ability when handling the boat in restricted waters. With the right combination of wheels and rudders the boat can be moved sidewise without forward or astern motion. However, under operating conditions the wheels should revolve as a unit in the same direction and at equal speeds.

Within one hour after the engines were tuned up a series of continuous

full power, dock and dynamometer, tests were run. There was not the slightest indication of trouble or stress in bearings, gearing or engines. The wheel design is from model experiments conducted at the experimental model basin in Washington.

Operating costs are low for boats with diesel engines and properly designed hulls, either stern wheel or screw tunnel. As an instance of this low cost the twin screw diesel towboat, Geo. T. Price, built by the Charles Ward Engineering Works and fitted with diesel engines of 720 shaft horsepower has a record of 10,000 revenue producing ton-miles per barrel of fuel oil consumed as compared with 3200 ton-miles per barrel of oil burned on twin screw, triple expansion, condensing steamers of approximately the same shaft horsepower and in the same service. This information is taken from the operating costs of the Federal Barge line during the period that the Geo. T. Price was chartered by this line. There is also the further saving of the wages and meals of at least two men not required on the diesel boat. There are now under consideration three diesel river boats over 1000 horsepower.

## Order Eight Large Diesels

Board Places \$2,290,300 in Contracts

**T**HE award of contracts for the construction of eight diesel engines for installation in shipping board cargo vessels was announced, Sept. 19, by Chairman T. V. O'Connor, of the board. Contracts for the construction of these engines have been awarded to four different companies and the time which will be required for completion of the engines will be approximately 185 days.

The ships to be converted to motor ships under this program have not been selected, but action to this end will be taken at some time prior to completion of the engines. The contracts which have been awarded are as follows:

1. With the Busch-Sulzer Bros. Diesel Engine Co. St. Louis, for two 3950 brake horsepower, 2-cycle, single-acting, internal combustion engines, with two Elliot scavenging blowers, for the price of \$584,600 for both engines.

2. With The Hooven, Owens, Rentschler Co., Hamilton, O., for two 4000 brake horsepower, 2-cycle, double-acting, internal combustion engines, with two A. B. & B. corporation scavenging blowers, for the price of \$592,000

for both engines.

3. With McIntosh & Seymour Corp., Auburn, N. Y., for two 3900 brake horsepower, 4-cycle, double-acting, internal combustion engines, with "longest piston and most piston rings", for the price of \$577,200 for both engines.

4. With the Worthington Pump & Machinery Corp. New York, for two 3625 brake horsepower, 2-cycle, double-acting, internal combustion engines, with two Elliot scavenging blowers, for the price of \$536,500 for both engines.

### Channel Steel Barge

New York and Hastings Steamboat Co., a subsidiary of the Anaconda Copper Co., has under construction by Midland Barge Co. at Salisbury, Md., its second deck barge built under the Ellis channel system of steel hull construction. The deadweight capacity will be 900 tons. Channels of 12-inch section will be used as in the first Ellis steel barge built for this owner. Steel is being fabricated at Midland, Pa. The dimensions are—length, 115 feet, width, 54 feet; depth, 9 feet 11 inches amidships.





*General View of Ninth Shipping, Engineering and Machinery Exhibition, Olympia, London.*

# Exhibition at Olympia Marks Progress in Marine Engineering

By Vincent Delpont

*European Manager, Marine Review*

COMING at a time when the prospects of British shipping and shipbuilding industries are improving, the ninth shipping, engineering and machinery exhibition, held at Olympia, London, Sept. 8 to 24, was of particular interest. This exhibition, which takes place in the fall of every alternate year, is organized by F. N. Bridges and Sons, Ltd., with the patronage and active support of the British Engineers' association Inc., the Society of Motor Manufacturers and Traders, Ltd., The Ship and Boat Builders' Association, Ltd., and the British Marine Oil Engine Manufacturers' association.

The honorary president of the exhibition for this year was the Duke of Northumberland, president of the Institution of Naval Architects. The number of the exhibits, which was about 280, and their importance, compelled the organizers this year to select Olympia, the largest of the exhibition halls of London, as the site of the show. The formal opening took place on Sept. 8 and was pre-

sided over by the Duke of Northumberland.

During the period of the exhibition, a number of technical societies and associations arranged official visits. Foreign nations were also represented among the exhibitors as well as among the visitors.

The exhibits were primarily representative of shipbuilding, shipping, marine, electrical and general engineering, yachts, power boats, engines, etc. and it is proposed to briefly describe that section of the show which pertains particularly to shipping and shipbuilding. A general survey of the exhibition tends to indicate that during the past two years progress has developed especially along the lines of greater security for passengers, economy of fuel, developments in internal combustion engines, and the use of special materials resulting in greater strength combined with reduction of weight.

The Parsons Marine Steam Turbine Co. Ltd., Wallsend-on-Tyne, recently fitted high-pressure geared turbine machinery designed for a boiler pressure of 550 pounds per square inch. They exhibited a model embodying the latest arrangements of geared turbines for marine work using higher steam pressure and temperatures than have been before adopted. There was also a model of an up-to-date marine turbine, complete with thrust, etc. Burmeister and Wain, Copenhagen, Denmark, showed a single cylinder working model of a double acting diesel engine, type 8840-D such as will be installed on the Swedish transatlantic passenger liner KUNGS-HOLM now building; this vessel will be fitted with two engines of this type, totalling 16,500 brake horsepower. A working model of a single cylinder single acting diesel engine, long stroke, crosshead type, and a model of a single cylinder single acting diesel engine of the trunk type were also shown, together with models of vessels recently built and en-

gined by Burmeister and Wain.

Norris, Henty and Gardners, Ltd., Particroft, Lancashire, showed a twin set of Gardner six-cylinder vertical heavy oil engines each of 210 horsepower and of marine type. The engine speed is 320 revolutions per minute. These engines are built up to 500 horsepower and are used on barges, tugs, cargo boats, and as auxiliaries on diesel engined ships. They include several improvements, such as electric starting by which they can be started from dead cold, a new variable speed governor giving control from full speed to  $\frac{1}{2}$  of full speed when driving the propeller. The same firm also display other smaller units. Davey, Paxman and Co. Ltd., Aldwych, London, had a 120-horsepower Paxman three-cylinder cold starting vertical crude oil engine, fitted with Blackstone's patent spring injection, which enables instant starting from cold on heavy oils. This engine, and a smaller one also on show, were fitted with the Paxman valve gear in which the valve itself can be freed without the necessity of dismantling the gear.

James Pollock, Sons and Co. Ltd., Lloyd's avenue, London, represent in Great Britain J. and C. G. Bolinders Co., of Stockholm, Sweden. They showed an extensive range of models, from a 90-horsepower two-cylinder Bolinder reversible heavy oil marine engine, which can be built up to 700 horsepower, to a 6 to 7 horsepower single cylinder Bolinder Beta stationary engine, direct coupled to a pump.

The Yeovil works of Petters Ltd., exhibited a 24 to 28 horsepower engine operating on crude residual or refined petroleum; it is a twin-cylinder engine with flywheel forward, fitted with reverse gear, stern gear and propeller. These engines can run on very low speed. The Ipswich works of the same firm showed a 55-horsepower propulsion unit fitted with reverse gear, which works at low pressure and temperature. Among other exhibits, the Parsons Oil Engine Co. Ltd., Southampton, showed a 55 to 65-horsepower marine set for kerosene fuel, with four cylinders  $6\frac{1}{2}$  inches bore, 8 inches stroke, running normally at 700 to 750 revolutions per minute. This series also comprises 6-cylinder engines of 85 to 105 horsepower and 8-cylinder engines 110 to 140 horsepower, all provided with water cooled crankchambers.

#### Spring Injection System for Diesels

Blackstone and Co. Ltd., Stamford, showed engines fitted with their spring injection system, which can be fitted to oil engines, both of the ma-

rine and industrial types. It consists of a low pressure fuel measuring pump, a moderate pressure fuel injector consisting of two members with a special spring between them, the inner member being the injector plunger and the outer the spring plunger, and a spring loaded fuel injector valve. The fuel is injected mechanically into the combustion chamber at the same point at each compression stroke and ignition takes place through the heat of compression in the combustion chamber. The same firm exhibited an uncheckable centrifugal pump which, it is claimed, handles without screening, liquids containing all kinds of hard and soft solids.

A range of paraffin engines from 14 to 75 horsepower was displayed by the Atlantic Engine Co. Ltd., Wishaw. These engines are constructed to start on petrol and run on paraffin, but they can be supplied to run on petrol only, when the engine will develop from 10 to 15 per cent more than the powers given when working on paraffin. Two Kromhout engines were shown by Perman and Co. Ltd., London. These marine oil engines are made in various powers from 9 horsepower to 200 horsepower with reverse gear, and from 275 horsepower to 700 horsepower on the air reversing type. No water injection is used for any size Kromhout engine. Models of various types of marine internal combustion engines, of powers from  $7\frac{1}{2}$  to 375 horsepower, were displayed by John Thornycroft and Co. Ltd., Southampton. E. T. White and Co. (1926) Ltd., London, exhibited paraffin marine engines combined with reverse gears.

#### Passenger and Cargo Vessels

The Union-Castle Mail Steamship Co. Ltd., London, showed a model of the ARUNDEL CASTLE, a twin screw steamer of 19,023 tons, built in 1921 by Harland and Wolff, Ltd., Belfast, Ireland. The Clan Line Steamers, Ltd., showed a model of the CLAN MACTAVISH built by the Ayrshire Dockyard Co. Ltd., Irvine, Scotland; the vessel is a modern geared turbine cargo of 7602 tons gross register, carrying 10,150 tons deadweight, with a speed of 14 knots per hour. The Mersey Docks and Harbor board (Port of Liverpool) exhibited a chart and a section model of a portion of the Liverpool docks.

Various machinery and equipment constituted a large portion of the exhibits. Gears were shown by John Holroyd and Co. Ltd., Milnrow, near Rochdale. The Keenock Company, Ltd., London, displayed models of

Keenock gearboxes operating by direct transmission through an infinite ratio pinion; speed control is obtained by moving a lever to right or left. Hans Renold, Ltd., Manchester, showed Renold standard drives which range from a fraction to 100 horsepower in 16 ratios. Igranic Electric Co. Ltd., London, displayed various types of their electric switch and control gear.

In the pump section the British Quadruplex, Ltd., London, displayed various types of rotary valveless pumps. Zwicky Ltd., Slough, displayed different types of piston high and low duty pumps fitted with the Zwicky valves, up to 30,000 gallons per hour per cylinder. They also showed a single joint filter for oils, water and petrol.

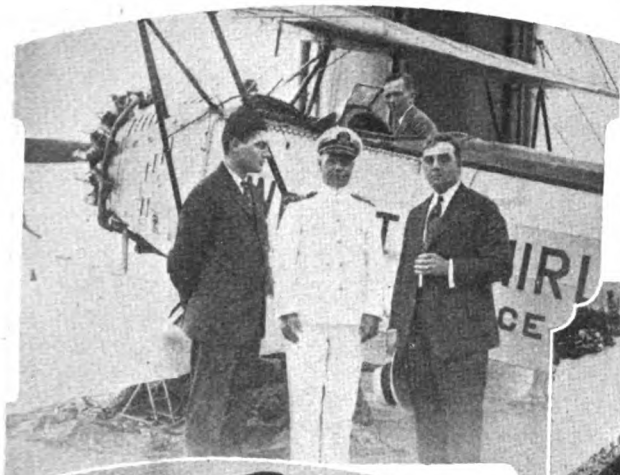
The exhibit of the Aster Engineering Co. (1913) Ltd., Wembley, Middlesex, contained, in addition to various industrial pumps and generating sets, one 50-horsepower direct coupled paraffin engine generating set for emergency ship lighting, and a standard Aster-Anthony boiler feed water regulator for the merchant marine. This equipment is featured by an open float maintained full of water by an air-cooled condenser so arranged that a small quantity of steam is continually condensed and falls into the open float, any surplus spilling over into the box. A seatless plunger control valve ensures control, and an external leakage duct provides a constant leakage path for the operating water. Compressors were displayed by Broom and Wade, Ltd., High Wycombe, Bucks.

Refrigerating machinery was exhibited by J. and E. Hall, Ltd., London. The Clews Petersen Piston Ring and Engineering Co., Ltd., West Hampstead, London, displayed their piston rings especially manufactured for use in diesel engines. A dynamic balancing machine, Lawaczek-Heymann patents, was shown by C. F. R. Giesler, Ltd., London. These machines are made in eight sizes, accommodating rotors from a few ounces weight up to 100 tons. The intermediate and large sizes are used for turbo runners, pump impellers, etc. A self contained 3-ton worm geared electric cargo winch was shown by Laurence, Scot and Co., Ltd., Norwich. Metropolitan-Vickers Electric Co., Ltd., Manchester, exhibited a worm geared winch capable of lifting three tons at 90 feet per minute, and motors used for various drives in ships' engine rooms. Reavell and Co., Ltd., Ipswich, displayed a three-stage marine auxiliary compressor, for diesel

(Continued on Page 52)



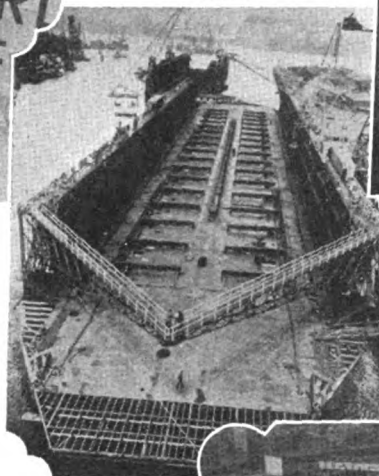
# Latest Marine Events in Pictures



Clarence D. Chamberlin and his plane on the runway built for his take-off from the Leviathan. Left to right Raymond Machlett; Capt. A. M. Moore, staff captain; and William Perrott, marine superintendent of the United States Lines



W. S. Hovey, president, Fairbanks-Morse, builders of diesels



Left—Drydock, 25,000 tons capacity building at Hamburg, for French government for Bordeaux

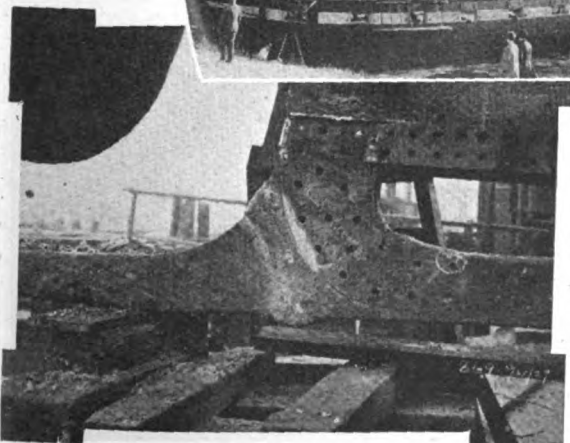
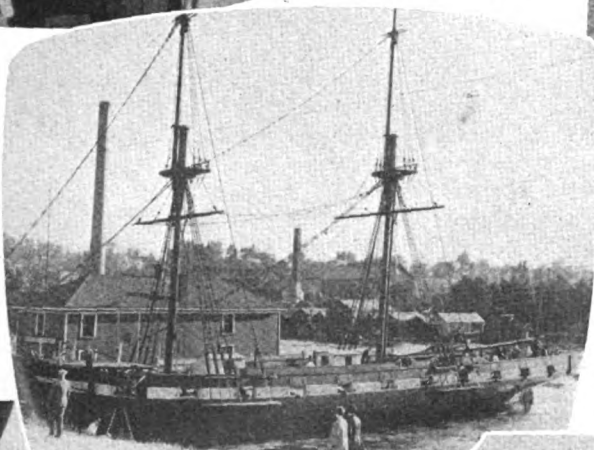


At Right and Below—Two flagships of the American navy, spanning 113 years of history, the U. S. S. Texas with Admiral Hughes on board, and the Niagara, Commodore Perry's flagship at the battle of Lake Erie, War of 1812



Above and Right—Nothing could better illustrate the strides made by the genius of man in the art of naval construction. The Texas has blisters against torpedoes and deck armor for protection against bombs from the air

Capt. P. P. Taylor, of M. S. Tampa, said: "I have sailed under sticks and steam and I have never seen a ship which operates so easily"



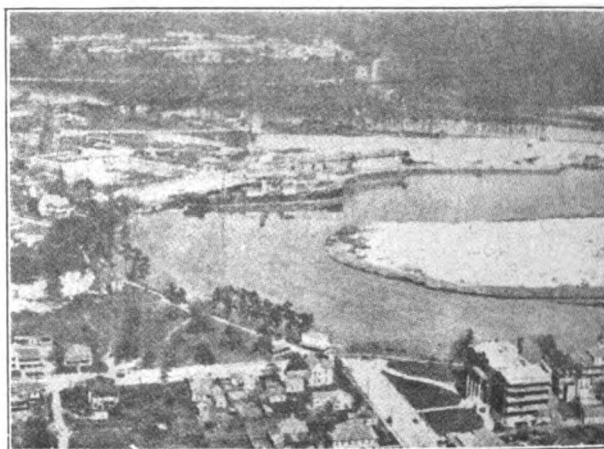
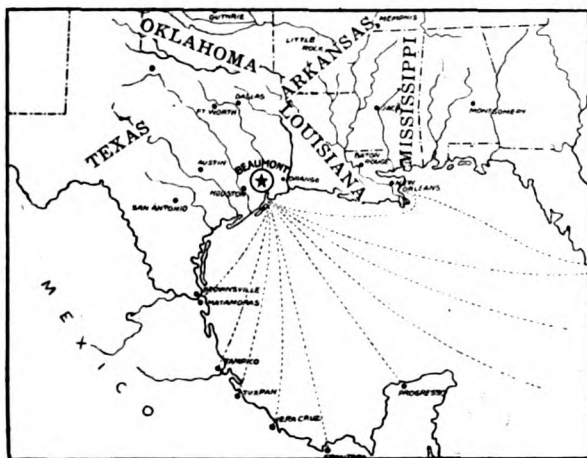
At Right—Old lighthouse at Cape Henry, Va., completed 1792. First lighthouse built by the United States

At Left—Stern shoe of S. S. West Keene Hermit welded at Federal S. B. & D. D. Co.



# Dock Management Progress Section

How Successful Dock Operators Have Met  
Problems of Giving Best Service to Ships



At Left—Location of the Port of Beaumont, Texas. At Right—Turning Basin, Beaumont Harbor.

## Beaumont Plans for Further Improvements as Ocean Port

By Ben Sykes Woodhead

A FEW farsighted citizens of Beaumont, Texas, spent a long time to persuade their fellow townsmen that Beaumont could be made a real deep water port. There were those who said: "Well, it might be done, but we've got to be shown." And they have been shown, for today Beaumont has a thirty-foot channel to the sea, and her 1926 traffic of 6,473,864 tons is something to be justly proud of for one so young, Beaumont as a port being hardly ten years old.

About eighteen or twenty years ago two events of marine nature occurred which interested Beaumonters. One was the capturing of an unfortunate whale at Port Arthur, twenty-two miles away. The whale died and was put on exhibition, and almost everybody in Beaumont went to see it. They could smell it anyhow on a windy day, so they figured that they might as well go and take a look at it.

The author, Ben Sykes Woodhead, is publicity director of the chamber of commerce, Beaumont, Texas.

The other marine event was the landing of the S. S. Nicaragua at Beaumont, this vessel being the first steamship ever to visit the Southeast Texas city. At the time she came to Beaumont, where she lifted a cargo of lumber, she was drawing less than ten feet of water, and she could not have been much more than 200 feet in length. Of course, the whole town turned out to gaze upon this monarch of the deep, but many were somewhat disappointed, having heard that steamships in some places, were 500 feet long.

In fact, it is doubtful if the NICARAGUA made as profound an impression upon the general populace as did the Port Arthur whale. But whatever the general populace might have thought, nevertheless the coming of the NICARAGUA lifted the veil of the future for a few men of vision in Beaumont, and their efforts to secure deep water for Beaumont rapidly assumed definite shape. When the other residents of Beaumont saw that these port pioneers meant business they be-

gan to do a little serious thinking themselves, and before long the whole community was pretty well of one mind that the Neches river possessed wonderful possibilities as an inland harbor.

Federal aid was sought. First the government virtually told Beaumont to attend to its oil refining and rice crops, and that such a thing as port development was too remote and improbable to be wasting time thinking about. But the leaders of the Beaumont element conceived the idea of a navigation district, and voted bonds for harbor improvement and agreed to match the federal government dollar for dollar in the matter of deepening the channel and in otherwise providing port facilities. Bonds were voted in the exact amount of engineers' estimates, something over \$498,000 and are said to have been the first bonds in the United States voted for navigation purposes except those issued by the State of New York for the Erie canal.

Beaumont's harbor today is fresh-

MARINE REVIEW—October, 1927



water, land-locked, and storm-free. Based on the standpoint of actual cost, the total amount invested in the municipal wharf and dock facilities aggregates \$1,640,282.90, subdivided, as follows:

Land including 36.5 acres of waterfront property with river frontage of 4200 feet, and Harbor Island (29.58 acres) .....	\$ 198,000.00
Wharves and docks including seven units totaling 3330 lineal feet .....	1,003,473.07
Warehouses on waterfront, six in number, aggregating 106,800 square feet of floor space .....	151,436.76
Cotton compress and warehouse unit (125 x 900 feet), exclusive of actual machinery .....	125,930.72
Loading and unloading equipment including Brown hoist locomotive, Lambert whirler steam crane, two electrically operated gantry cranes, and two electrically operated overhead conveyors in warehouse .....	35,859.60
Trackage on aprons and behind warehouses (24,138 feet) .....	96,250.05
Fire protection equipment .....	17,140.20
Shell fills and roads ....	11,192.50

The land on which these facilities are located is today valued at more than half a million dollars, so that the total investment at this time is more than \$2,000,000. In addition to the above described properties, machinery has been installed in the cotton warehouse at a cost of more than



Photo by Steffens-Colmer Studios

**SHELBY WIGGINS**

*Recently Appointed Port Director of Beaumont*

\$90,000, to handle cotton shipments.

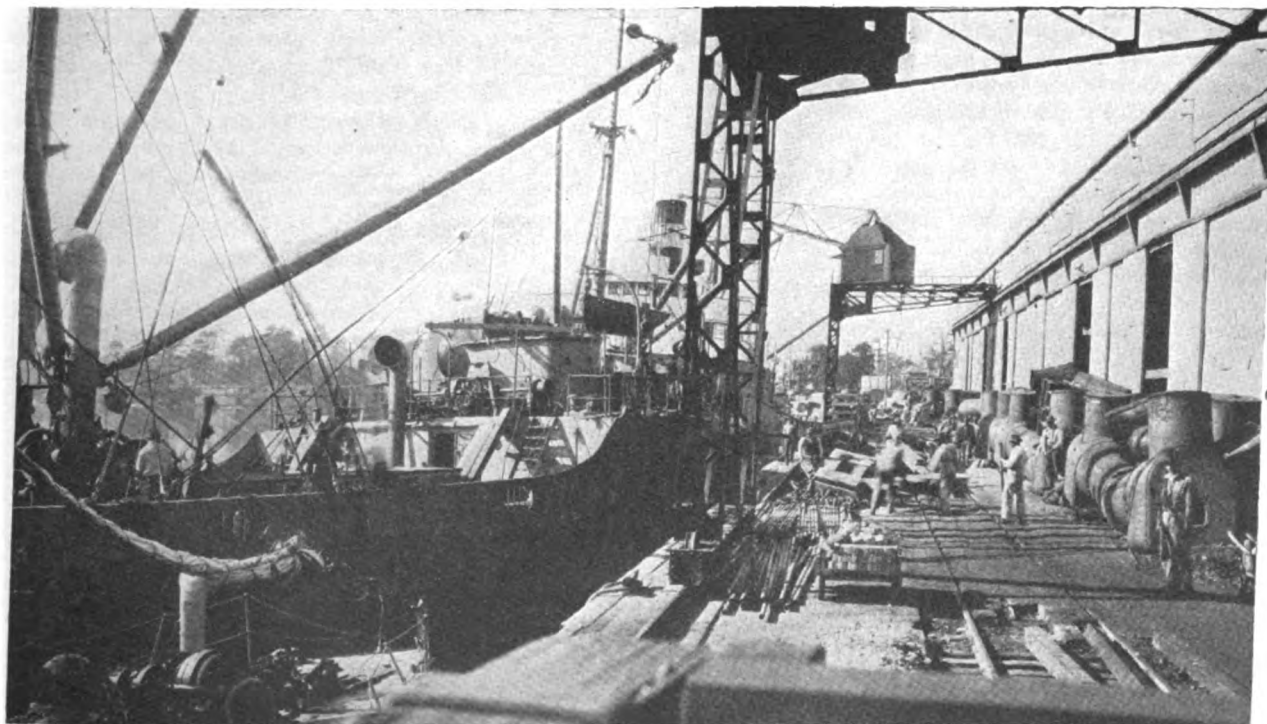
The municipal docks and turning basin are located 49 miles from the sea. A dry dock of 3500 ton lift capacity and bunker stations are available. About a mile up the river above the municipal docks, located on an island in the Neches river, is the plant of the Pennsylvania Shipyards, Inc.

At this time a bond issue of \$150,000 more or less, is under contemplation,

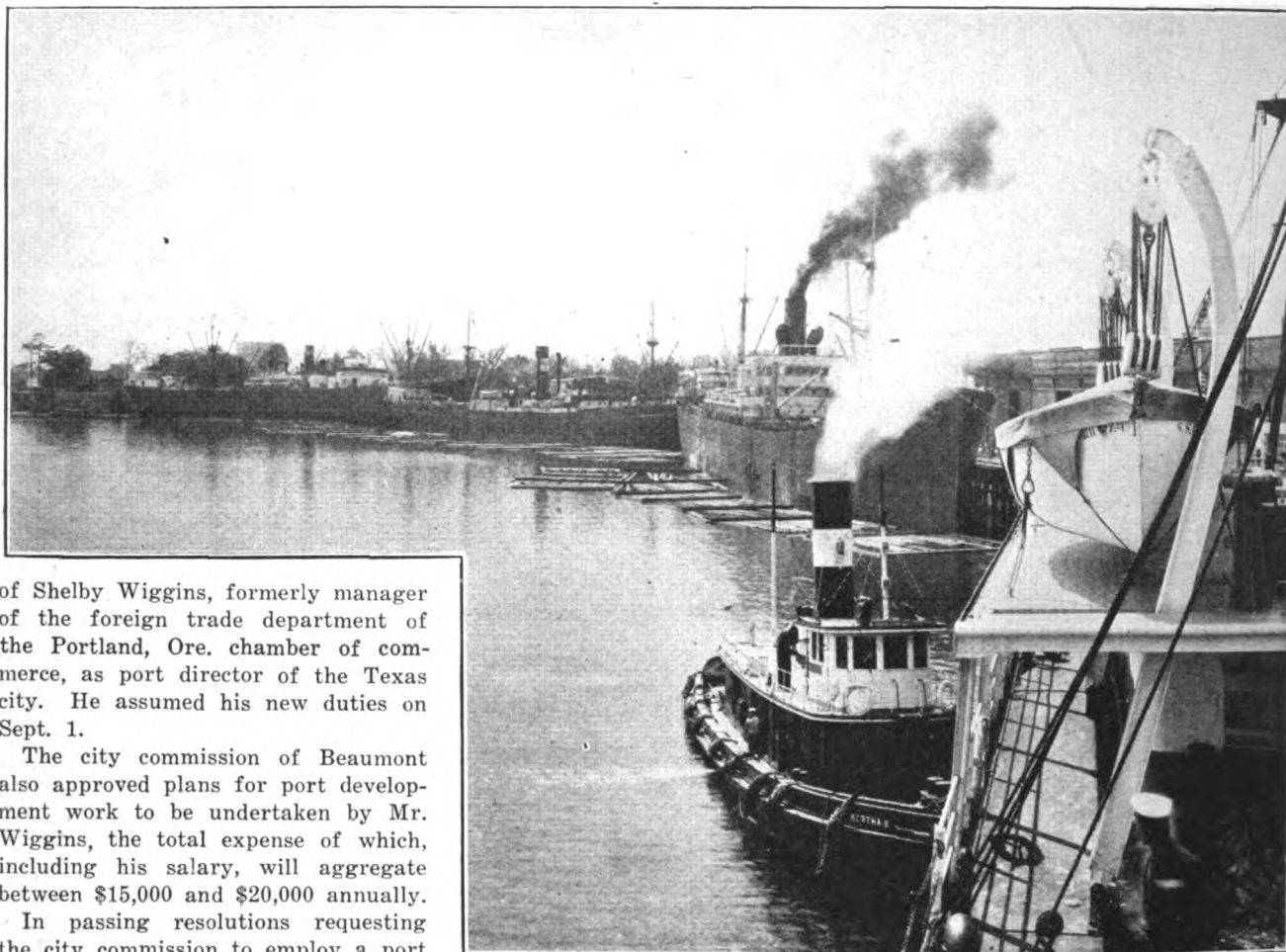
for the purpose of effecting the following improvements: Construction of 300 feet of trestle to handle cargo for unloading steel from barges, with installation of derrick to facilitate such handling; construction of low-level wharf, 175 x 70 feet, for intercoastal canal trade; purchase of new loading and unloading equipment including electric magnet and rice conveyer; concreting of open space between waterfront warehouses; and extension of fire protection lines.

In 1917 when Beaumont's channel to the sea was 24 feet in depth, 674,058 tons of cargo moved through the new port. This figure, as well as that of 6,473,864 tons quoted for 1926, includes tonnage moved over the other docks at Beaumont; it does not represent exclusively figures for the municipal wharves. In fact, petroleum products constitute the most important export commodity at Beaumont, and practically all cargo of this nature moves over the docks of the Magnolia refinery. The Yount-Lee Oil Co. and the Sun company have recently constructed loading docks a few miles down the river from Beaumont.

A full time port director has been appointed in order to obtain more tonnage for Beaumont and to supervise generally its harbor activities. Acting upon the recommendation of its dock and wharf commission, the City of Beaumont secured the services



*Handling Cargo from and to Ocean Ships at Municipal Docks, Beaumont, Texas.*



of Shelby Wiggins, formerly manager of the foreign trade department of the Portland, Ore. chamber of commerce, as port director of the Texas city. He assumed his new duties on Sept. 1.

The city commission of Beaumont also approved plans for port development work to be undertaken by Mr. Wiggins, the total expense of which, including his salary, will aggregate between \$15,000 and \$20,000 annually.

In passing resolutions requesting the city commission to employ a port director, the Beaumont Dock & Wharf commission pointed out that such an official would serve the purpose not only of supervising port activity in Beaumont but also of enlarging that activity and securing additional tonnage for the port.

Mr. Wiggins' experience at Portland, which is similar to Beaumont in that it is an inland port situated on a deepened channel, renders him peculiarly well qualified to understand the problems of the Port of Beaumont. He is 32 years of age, is six feet in height, and weighs 200 pounds. Mr. Wiggins is a university graduate and has had extensive experience in railway transportation as well as in port and harbor work.

It will be interesting to watch the future development of the various Gulf ports which have sprung up in recent years. Beaumont, Houston, and Corpus Christi in Texas, and Lake Charles in Louisiana are ports which have come into existence almost entirely within the past decade. Shipping men in these various cities are hopeful that the entire stretch of Gulf coast from New Orleans to Corpus Christi, Texas and perhaps later to Point Isabel, near Brownsville, Texas might eventually become a major shipping area, similar to that which exists now along the northern

GENERAL VIEW SHOWING OCEAN VESSELS AT MUNICIPAL DOCKS, BEAUMONT,

and middle Atlantic seaboard. The process of building up such a widespread industry will necessarily be a slow one, and it is possible, of course, that too many communities will want to become deep water ports with the result that the supply will exceed the demand.

However, the principle of making this southern territory a shipping section of major importance is founded on sound economic theory. All of the middle western and southwestern states can certainly export through the Gulf ports more economically than through any other areas. A dissertation upon the probabilities and improbabilities of the South's becoming of such vast importance from a shipping standpoint, however, would constitute another long story and would be impracticable here.

As far as the Port of Beaumont itself is concerned, it is believed that within a reasonably short time cotton will be added to its list of important exports and that perhaps in time grain movements from the middle west will seek an outlet through Beaumont. Contemplated expansion on a large scale of the Pennsylvania Shipyards, Inc., if it materializes, will do

much toward adding to Beaumont's facilities for adequately caring for increased shipping.

Like any other young port, Beaumont is faced with the problem of getting regular steamship service so that the matter of securing additional cargo can be based on prompt and reliable service. Ships will come where cargo is offered, but the cargo will not be available until definite assurance is had that the ships will really be there to take care of it. Regular sailings at this time are maintained out of Beaumont to: (1) Liverpool and Manchester; (2) Havre and Antwerp, Ghent and Rotterdam; (3) Hamburg and Bremen; (4) Genoa and Naples; (5) Pacific Coast ports.

### T. R. Gillmore Dies

On Sept. 16, T. R. Gillmore, vice president of the Cleveland Stevedore Co. and superintendent of the Wheeling and Lake Erie Docks at Huron, Mich., died at his home at Huron. He was 57 years old and had been in failing health for some time. Mr. Gillmore is survived by his wife and daughter. He was well known and had many friends in the shipping trade on the lakes.



# Late Decisions in Maritime Law

## Legal Tips for Shipowners and Officers

Specially Compiled for Marine Review

By Harry Bowne Skillman

Attorney at Law

**A** CONTRACT of affreightment allowing abandonment of voyage when war or hostilities, actual or threatened, make it unsafe or imprudent to sail, is not void for want of mutuality, said the court in the case of *Churchill Line v. Gulf Naval Stores Supply Co.*, 12 F. (2d) 131; such provision not making service depends on the master's or the owner's independent will.

**CREW** of a vessel entering port for repairs, not to load or unload cargo, were not entitled to make demand for half wages, and such crew, improperly abandoning the vessel on refusal of demand for half wages, were deserters and not entitled to recover wages, nor could they recover on the unpleaded ground that fear of personal violence at hands of striking seamen excused their abandonment of the ship and performance of contract.—*UNITED STATES v. SMITH*, 12 F. (2d) 265.

**NARROW** channel rule which requires traveling on the starboard side of the fairway "when it is safe and practicable," was violated by a tug attempting to make starboard to starboard passing in narrow channel, merely because more convenient, in view of the strength and weight of its tow, notwithstanding it followed a custom in so doing.—*LEHIGH COAL & NAVIGATION CO. v. COMPAGNIE GENERALE TRANSATLANTIQUE*, 12 F. (2d) 337.

**A SHIPPER** who gave no notice of damage to goods shipped for 70 days was not in position to urge unreasonableness of provision of bill of lading requiring that demand for damage be made within 10 days after delivery.—*W. R. GRACE & Co. v. PANAMA RAILROAD CO.*, 12 F. (2d) 338.

**PIER END** statute of New York, declaring that vessels lying at the exterior end of wharves of the North or East river, do so at their own risk of injury from vessels entering or leaving any adjacent dock or pier, does not govern right of recovery of damages in admiralty, but, being a regulation within the power of the state, violation of it is a fault, which, if it contributes to a collision, results in liability.—*NEW YORK & CHARENTE STEAMSHIP CO. v. UNITED STATES*, 12 F. (2d) 348.

**AN IN-COMING** steamship, which, instead of anchoring at a safe distance, stops within dangerous proximity to a quarantine station wharf, and which drifted or was driven by the wind against the wharf and in-

jured the same, was negligent, and was not relieved from liability on the ground of inevitable accident. That the ship followed the usual, but negligent, custom is no defense, nor is the fact that the ship was in charge of a compulsory pilot, where it was with acquiescence of the master, whose authority remained paramount.—*CHARENTE STEAMSHIP CO. v. UNITED STATES*, 12 F. (2d) 412.

**AWARD** for personal injuries to a foreign seaman sustained in an American port should include an allowance for pain and suffering and permanent disability. An award of \$400 for a painful injury, resulting in 10 per cent permanent disability to a seaman's arm and requiring two operations, was held inadequate in the case of *HEREDIA v. DAVIES*, 12 F. (2d) 500, and was increased to \$1000.

**THE** court held in the case of *United States Shipping Board Emergency Fleet Corp. v. Rosenberg Bros. & Co.*, 12 F. (2d) 721, that as to a shipment from San Francisco to Cardiff, it was a deviation to proceed first to Hamburg, 750 miles beyond, notwithstanding liberty clause in bill of lading to touch at any ports in any rotation or order in or out of the customary route; this not being within the scope of the voyage.

**UNDER** charter party providing for 72-hour period before lay days began to run, Saturday afternoon, Sunday, and Armistice day will not be added to the 72-hour period in determining dispatch money, where the charter party contained no exceptions; where Sundays and legal holidays are excepted from loading period, lay days commence at midnight when the 72 hours expired on Sunday. Lay days for unloading cargo on ship arriving at night do not commence to run until 7 o'clock on the morning following, at port legally closed until 7 a. m., and non-working day declared by master of port should be excepted from running of lay days.—*SOUTH AMERICAN METAL CO. v. KJOGE*, 12 F. (2d) 562.

**GENERAL** maritime law does not give lien to broker for services in shipping a crew for a vessel in her home port, nor does such service come under the head of "necessaries" in the ship mortgage act of 1920.—*PRINCESS*, 12 F. (2d) 808.

**GOVERNMENT** had an unquestioned right to requisition shipping, to use it in whole or in part for its direct war purposes, and to con-

duct directly or indirectly through such agencies or instrumentalities as it chose, commercial transportation, and a local statute of Porto Rico or of any state cannot stand as a bar to the effective exercise of the war power. In taking over and operating ships in its sovereign capacity as a war measure, it cannot be held to have waived sovereign right or privilege, unless so provided in congressional enactments.—*UNITED STATES v. PORTO RICO FRUIT UNION*, 12 F. (2d) 961.

**UNDER** the international regulations for preventing collisions at sea a vessel proceeding on a curved course was not required to change her course for crossing a vessel on her port, and it was the duty of such other vessel to take notice of the character of her course. The "course" of a vessel proceeding on a curved course, the case of *Liverpool, Brazil & River Plate Steam Navigation Co.* is the actual course, and not compass direction, of the heading of the vessel at the time the other is sighted. *v. United States*, 12 F. (2d) 128, holds,

**OWNER** and charterers of vessel, use of which was lost because of a repairer's negligence, are entitled to recover the market value of the use for the period of delay.—*Flint v. Robins Dry Dock & Repair Co.*, 13 F. (2d) 3.

**WHERE** charterers cancel the charter party, the shipowner's measure of damages is the difference between what the shipowner would have made under the canceled charter and what he earned under a substitute charter.—*United Transportation Co. v. Berwind-White Coal-Mining Co.*, 13 F. (2d) 282.

**SHIPOWNER**, neglecting to shift sold bunker coal, was liable for fire and water damage to cargo, by spontaneous combustion, and not entitled to limit liability.—*Arkell & Douglas, Inc. v. United States*, 13 F. (2d) 555.

**UNDER** a charter explicitly guaranteeing that vessel would sail on or before a certain date, the owner of the vessel is liable for delay, although failure of the vessel to sail as agreed was not the fault of either the owner or the charterer, it was held in *Dexter & Carpenter Co., Inc. v. United States*, 13 F. (2d) 498. It was also held that the right to cancel such charter would be implied on failure to sail as agreed, where time was of the essence, though the vessel was ready to sail shortly after.

## Port Authorities Meet at St. Louis

The sixteenth annual convention of the American Association of Port Authorities will be held at the Hotel Statler, St. Louis, Oct. 4 to 7, inclusive.

The usual business of the convention and reading of annual reports of the officers will take place. For the remainder the time will be largely taken up in the presentation of papers by a number of prominent port executives. On Oct. 6, there will be a harbor inspection trip with luncheon on board the harbor steamer ERASTUS Wells as guests of Capt. J. Roy

Parker, harbor master of St. Louis.

The annual banquet will be held at the Hotel Statler at 8:00 p. m., Oct. 6. Among the prominent speakers will be Curtis D. Wilbur, secretary of the navy and J. Spencer Smith, president, American Association of Port Authorities, president, of the New Jersey state board of commerce and navigation.

### Mail Contracts Needed

Stanley Dollar, president of the Dollar Steamship line on returning from Europe recently said, "A passenger and freight line under the American flag in the North Atlantic

trade could be made to pay if it had some support from the government. Once the fleet now in operation passes into the hands of private owners it must not be abandoned by the government. Aggressive operation is what is needed in the North Atlantic trade, and such a line should be fortified with United States mail contracts. With such aid it could be operated successfully in competition with the foreign lines."

Mr. Dollar stated that the Dollar fleet in round-the-world service was doing an excellent business and that the present year showed an improvement over last year, also that the trans-pacific business was growing.

# Propose Diesel Electric Conversion

BY E. C. KREUTZBERG

MUCH interest has been aroused by the decision of the shipping board to take bids on reconditioning the COURAGEOUS, DEFIANCE and TRIUMPH in accordance with plans and specifications prepared jointly by Gibbs Brothers Inc., of New York, and Rear Admiral D. W. Taylor, United States navy, retired. It is proposed, by certain changes in the hull lines and by the installation of new power plants, to increase the speed of these vessels, and it is estimated that this work can be done at not over \$1,250,000 for each ship. Study of the plan indicates that it has merit from a number of standpoints.

Roughly, it is proposed by the Gibbs-Taylor plan to thus obtain American vessels which will be on even terms with the modern combination passenger and freight vessels now in service and being built under European flags. The European freighter which is proving most successful today is visualized as a craft around 10,000 tons deadweight, 600,000 cubic feet of carrying space and 13 to 14 knots per hour in speed. The shipping board believes that it can convert the three vessels above named into ships fully meeting this European standard, and that it will be able to do so at a cost substantially 60 per cent of the cost of building new ships in the United States and substantially 10 to 15 per cent less than the cost of building new ships in Europe.

Indications at the present time are that the bids to be taken by the shipping board on the basis of this plan will be followed by the placing of contracts for recondition-

ing two of the above named vessels. It is considered likely that each will be equipped with different makes of engines and other apparatus so as to afford a broad basis of comparison of operation. Experience obtained with these boats after they are placed in commission, it is expected, will determine not only whether additional vessels will be reconditioned along the same lines, but the kind of equipment which will have the preference.

In explaining the principal details of the Gibbs-Taylor plan, it may be stated that the three vessels which formed the basis of the report were built by the Bethlehem Shipbuilding Corp. and launched just before the termination of the war. Since then they have lain idle. Each of these craft is 11,773 tons deadweight, and was designed to have a speed of 10½ knots.

It is proposed, in the first place, to cut off the present bow at the collision bulkhead and to replace it with a bow 11 feet longer than at present. In the second place, it is proposed that the propeller be relocated by installing a new stern frame, and that a new rudder be installed. These are the only hull changes involved, the entire hull between the collision bulkhead and the stern frame remaining exactly as at present.

It may be stated that the Gibbs-Taylor plan is the outgrowth of extensive investigations and tank experiments which were conducted continuously over a period of nearly seven months. The tank tests indicated that the hull changes detailed above would produce an im-

provement in speed of at least one knot with the present power plant. They further showed it to be practical and profitable, as a result of these changes in the lines of the hull, to add to the power. It was determined that it would be advisable to increase the 2500-horsepower with which each of these boats now is equipped up to 4000 horsepower.

In the investigation out of which the present plan evolved, major consideration was given to the kind of a power plant to be installed, namely, whether the boats were to be dieselized or equipped with diesel-electric drive. It was found that whereas the diesel engine operates more efficiently at comparatively high speeds, the greatest propeller efficiency is obtained at lower speeds. Consultations with manufacturers showed that large diesel engines for direct drive would be much higher in cost than an equivalent amount of horsepower in smaller units for the reason that the latter with their smaller factors and greater numbers can be made on a manufacturing basis in which the element of quantity production enters. It was found that the loss in horsepower entailed in generating electricity then consuming it in motors was more than outweighed by the fact that propulsion by the electric drive is much more efficient than propulsion by the direct drive. As a matter of fact, for direct drive a propeller speed of about 120 to 150 revolutions was required whereas with diesel electric drive the best results were obtained with a propeller driven at somewhat less than 70 revolutions. All these facts swayed the decision in favor



of diesel electric drive as a solution.

Each ship is to have four diesel engines, each with 1200 horsepower. The ships are to be operated by a single screw by two motors of 2000 horsepower each.

In selecting the diesel electric drive several factors were strongly influential. One of them is that with the electric drive, the operation of the motors may be fully controlled from the bridge. Another is that there are a number of manufacturers in this country who can produce the small diesel units which are required in the electric drive. Another is that it was felt to be much more simple to reverse the propeller with motor drive than with direct diesel drive. Another is that with electric motors of constant speed, there would be no racing of the engine when the

propeller was out of the water, and in this way likelihood of breakage of the propeller shaft or damage to the machinery would be much reduced. Another is that with four engines, four generators and two motors, a complete breakdown of the power plant was practically an impossibility and that, should one unit fail, the ship would be able to complete her voyage with the remaining equipment.

The COURAGEOUS, DEFIANCE and TRIUMPH were built at a time when the national emergency demanded tonnage carriers, so that these boats were given an unusually deep draft. The plan of reconditioning approved by the shipping board involved a loss of about 1300 tons in the deadweight of each ship, bringing them down to around 10,500 tons. It is

stated that the resulting lightening of the hulls will bring them into compliance with the latest practice in design; and the installation of the new machinery will improve the stability.

To summarize, the plan proposes that the vessels named shall be converted into 10,500-ton boats, of about 600,000 cubic feet cargo space each, and with a speed of 13 to 14 knots an hour, thus making them the equal of the best merchant vessels afloat today. As previously stated, the shipping board estimates that this work can be done at a cost of about \$1,250,000 for each boat. This cost is expected to yield a boat which will be able to compete on even terms for the world's business with merchant ships under any flag and thus keeping abreast of recent developments.

## U. S. Lines' Exhibit Attracts Attention

**A**MONG American exhibitors at the advertising exhibition and convention held at Olympia, London, July 18 to 23, the United States lines' attractive stand was the center of much interest. Situated on the ground floor of Olympia, not far from the palace of beauty, no less than 10,000 people passed it daily.

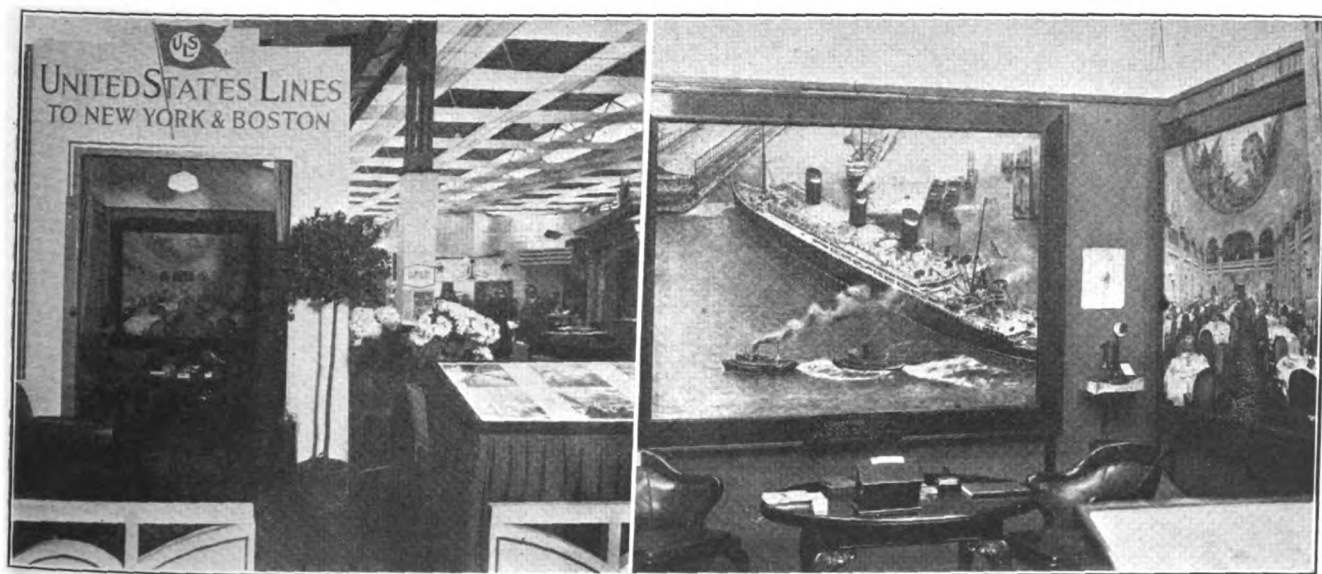
Modern advertising methods were nowhere better utilized than by this shipping company. The interior of its stand was not unlike a cosy writing room on board ship, with an inviting setting of bay trees and flowers, soft rugs, comfortable chairs and tables, with writing materials and literature at the disposal of visitors. Two large

textophote pictures of the LEVIATHAN, illuminated by concealed lights, adorned the walls and put one into the atmosphere of a big liner at once. One was a view of the large liner nosing her way into her berth at New York, and the other was a replica of her luxurious dining saloon. The visitors' book was signed by hundreds of people from all over the world.

An interesting film showing the good times enjoyed by passengers on United States lines' ships, drew a crowd to the cinema, a special leaflet calling attention to the film having been distributed. Interest was heightened in views of the news from Rumania,

when it became known that the Queen of Rumania, Prince Nicholas and Princess Ileana, who crossed to America in the LEVIATHAN, were among the "screen stars" in the picture.

The United States lines devoted their beautiful window on Regent street to advertising the exhibition during the week. One of the fine modern posters of the exhibition served as a centerpiece, flanked on either side by framed pictures of the company's stand at Olympia, and the illuminated suggestion, "Pay a visit to Olympia this week," sent many visitors who crowded around the window daily, to see the greatest advertising exhibition held in Britain.



STAND OF THE UNITED STATES LINES AT THE ADVERTISING EXHIBITION HELD AT OLYMPIA LONDON JULY 18-23. AT RIGHT—TEXTOPHOTE PICTURES OF THE LEVIATHAN APPROACHING HER BERTH IN NEW YORK AND VIEW OF DINING SALOON

# Late Flashes On Marine Disasters

Brief Summaries of Recent Maritime Casualties—  
A Record of Collisions, Wrecks, Fires and Losses

NAME	DATE	NATURE	PLACE	DAMAGE RESULTING	NAME	DATE	NATURE	PLACE	DAMAGE RESULTING
Andre Lebon	Aug. 5	Collision	Marseilles	Not stated	Karma	Aug. 19	Struck sub. object	New York	Propeller
Atlanta	Aug. 12	Collision	Barry	Damaged	Katherina Dorothea Fritzen	Aug. 17	Aground	Nr. Roervik	Damaged
Astrea	Aug. 29	Disabled	New York	Engine	Kibi Maru No. 2	Aug. 18	Stranded	Nr. Cape Minabetsu	Not stated
Artemisia	Aug. 29	Aground	Puerto Plata	Not stated	Key West	Aug. 21	Aground	Quebec	Floated
Adour	Aug. 31	Disabled	Bermuda	Machinery	Luther Hooper	Aug. 16	Aground	Off Sandy Hook	Floated
Anacortes	Sept. 1	Ashore	Bally Quintin	Floated	Lissa	Aug. 31	Aground	Sound of Islay	Not stated
Agan	Sept. 1	Collision	At sea	Not stated	Moon Magic	Aug. 14	Collision	New York	Sank
Ascot	Aug. 23	Fire	Gibraltar	Holds 1, 2 and 3	Mincio	Aug. 17	Aground	Savannah River	Floated
Athamantios Korais	Aug. 24	Sank	Salonica		Marietta	Aug. 4	Sank	Off Cuba	
Britannia	Aug. 16	Collision	Detroit river	Port side	Mosel	Aug. 8	Collision	Off Elbe I. Light-ship	Stem; plates
Bournemouth	Aug. 18	Aground	Gulfport	Floated	Mamari	Aug. 4	Disabled	Off Buenos Ayres	Stem; plates
Baron Fairlie	Aug. 4	Aground	Garden Reach	Floated	Mentor	Aug. 11	Collision	Nr. Lisbon	Stem
Ben Read	Aug. 8	Ashore	Off North Creek	Floated	Minas Prince	Aug. 25	Disabled	Off Provincetown	Waterlogged
Broadgarth	Aug. 9	Collision	Alexandria	Bulwarks	Marie Maersk	Sept. 1	Aground	Nuevitas Channel	No. 1 hold
British Princess	Aug. 11	Collision	Nr. Lisbon	Not stated	Mirabella	Sept. 1	Ashore	Nr. Ilicos	Floated
Bay State	Sept. 5	Collision	Lake Erie	Plates	Maritime	Aug. 29	Disabled	Boston	Engine
Belgot	Aug. 27	Aground	Melvers Point	Floated	Munsomo	Sept. 3	Collision	Off Hook	Amidship
Branksea	Aug. 31	Ashore	Off Lannacombe	Not stated	Minnequa	Sept. 10	Collided pier	New York	Plates
Cape La Have	Aug. 10	Fire	Bridgewater	Decks	Monkstone	Aug. 16	Collision	Gravesend	Port side
Cadillac	Aug. 22	Aground	Belle Isle	Floated	Moonmagic	Aug. 15	Collision	Off Liberty	Sank
Chas. H. Cramp	Aug. 18	Ashore	Yaquina Head	Floated	Marion D. Thermiotis	Aug. 22	Fire	Corcubion	Considerable
Cincinnati	Aug. 10	Collision	Hankow	Damaged	Maringa	Aug. 9	Ashore	Sal Island	Not stated
Camamu	Aug. 19	Ashore	Off Virginia Capes	Floated	Magi	Aug. 15	Sank	Erith	Floated
Cape Corso	Aug. 23	Disabled	Key West	Boiler	Moena	Aug. 20	Disabled	Ymuiden	Engine
Crackshot	Aug. 4	Struck quay wall	Havre	Propeller; plates	Medellin	Aug. 23	Not stated	River Magdalena	Damaged
Cabo Tortosa	Aug. 4	Disabled	Cadiz	Port engine	Mattero	Aug. 25	Disabled	Off St. Vincent	Engines
Clytha	Aug. 9	Struck sub. object	Off Lisbon	Leaking	Northern Light	Aug. 16	Fire	Mobile	Total loss
Conte Stefano Tizza	Aug. 9	Collision	Alexandria	Not stated	Norwich Trader	Aug. 12	Struck sub. object	River Yare	Propeller
Chojia Maru	Aug. 11	Collision	Tientsin	Not stated	Nicarao	Aug. 31	Explosion	Off Island El Parde	Not stated
Caracoli	Aug. 23	Fire	New York	Considerable	Nellie	Aug. 22	Sank	Not stated	
Carama	Aug. 23	Disabled	Ferrol	Forepeak	Nunzio Bertino	Aug. 21	Collision	Leghorn	Not stated
C. A. Black	Sept. 6	Aground	Nr. Algonac	Floated	Nordsoen	Aug. 23	Collision	Bremen	Not stated
Champlain	Sept. 2	Collision	Elizabeth River	Sank	Noord Friesland	Aug. 25	Collision	Waterloo Bridge	Port bow
Cherry Branch	Aug. 16	Aground	So. of Green Island	Not stated	Oakman	Aug. 17	Disabled	Charleston	Engine
Cragside	Aug. 16	Collision	Greenwich	Not stated	Orsa	Aug. 25	Collided quay wall	Glasgow	Stem
Choshu Maru	Aug. 22	Aground	Taku Bar	Not stated	Panther	Aug. 11	Fire	Oulton Board	Total loss
Californian	Aug. 24	Struck dock	San Francisco	Plates	Philomena	Aug. 25	Not stated	Port au Port	Total loss
City of Rayville	Sept. 1	Collision	S. E. Carnero Pt.	Damaged	Princess Charlotte	Aug. 31	Aground	Wrangell Narrows	Floated
Cherbrooke	Aug. 13	Collision	Rye	Sank	Prince Rupert	Aug. 23	Struck rocks	Seymour Narrows	Rudder
Constance	Aug. 13	Collision	Dover	Port quarter	Point Loma	Aug. 23	Collision	Nr. San Francisco	Rudder
Clan Kenneth	Aug. 19	Fire	Port Said	Not stated	Pei Hua	Aug. 25	Collision	Tientsin	Slight
Donnacona	Aug. 21	Struck	Soo river	Wheel	Paul Luckenbach	Sept. 11	Collision	San Francisco Bay	Slight
Delia	Aug. 18	Struck sub. object	Halifax	Propeller	Pentreath	Aug. 22	Ashore	Smyrna	Floated
Douglas	Aug. 5	Ashore	Great Cars Rock	Floated	Re Vittorio	Aug. 8	Aground	Buenos Ayres	Floated
Dorella	Aug. 8	Ashore	Sorsby Sands	Floated	Rafael Nunez	Aug. 6	Sank	Nr. Heredia	
Dorothy	Sept. 1	Struck rocks	Romana	Bows	Raven	Aug. 8	Disabled	Percuil	Rudder
Dundrennan	Sept. 3	Collision	Off Hook	Bow	Ralph Budd	Sept. 6	Ashore	Pine River	Floated
Elin	July 28	Fire	Bay of Biscay	Total loss	Raimund	Aug. 00	Cyclone	At sea	Considerable
Elterwater	Aug. 8	Stranded	Scoughall Rocks	Not stated	Roi Albert	Aug. 26	Collision	Not stated	Bow
Early Blossom	Aug. 8	Aground	Haisboro	Floated	Rugby	Aug. 26	Ashore	Covehithe	Not stated
East Wales	Aug. 12	Collision	Barry	Damaged	Rigoletto	Aug. 13	Collision	Dover	Not stated
Easter K	Aug. 25	Disabled	San Juan	Waterlogged	Russia	Aug. 17	Sank	Russia dock	Not stated
E. A. S. Clarke	Sept. 9	Aground	West Neebish channel	Floated	R. Passmore	Aug. 24	Disabled	Castletown	Leaking
Eastern Glade	Aug. 30	Disabled	Quarantine	Engine	Sunugentco	Aug. 14	Ashore	Englewood	Floated—steering gear
Erhlyn	Aug. 22	Gale	Turks Island	Leaking	San Fraternal	Aug. 4	Sank	Off Rupert Island	Total loss
Ellerday	Sept. 9	Collision	Nr. Marseilles	Bows	Shinan Maru	Aug. 11	Collision	Tientsin	Bridge deck; forecaste
Finar Jarl	Aug. 26	Ashore	Salthole	Floated	Stewart T. Salter	Aug. 25	Hvy. weather	Parrsboro	Damaged
Ekaterini C	Aug. 31	Ashore	Buenos Ayres	Not stated	Shickshinny	Aug. 30	Collided pier head	Liverpool	Stem; plates
Flower of Devon	Aug. 5	Ashore	Nr. South Pier	Floated	Songa	Sept. 1	Aground	Cambellton	Floated
Favorita	Sept. 2	Aground	San Blas Bay	Not stated	Sambre	Aug. 15	Ashore	Victoria	Floated
Fuelite	Aug. 18	Collision	Off Victoria	Slight	Sumidagawa Maru	Aug. 15	Stranded	Yenryumisaki	Not stated
Fitzsimmons	Aug. 18	Collision	Missile Ground	Not stated	Stuartstar	Aug. 18	Aground	Talavera Channel	Floated
Fidelitas	Sept. 12	Aground	Savannah	Machinery	Silarus	Aug. 24	Collision	River Scheldt	Port side
Gloucester	Aug. 22	Disabled	Gravesend	Not stated	Sicily	Aug. 15	Aground	Liverpool	Not stated
Gunvall	Aug. 16	Collision	Buenos Ayres	Floated	Stonian	Aug. 16	Disabled	Aberdeen	Engine
Glofield	Aug. 18	Aground	Bruges	Stem	Streelkerk	Aug. 22	Fire	Antwerp	Not stated
Glanbrydan	Aug. 30	Aground	Mud Lake	Floated	Tremblay	Aug. 16	Aground	Nr. Grondines	Floated
Huronic	Aug. 23	Aground	Off Elbe I. Light-ship	Slight	Taiho Maru	Aug. 8	Disabled	Rio de Janeiro	Steering gear
Heimdal	Aug. 8	Collision	Newcastle-on-Tyne	Slight	Takahama Maru	Aug. 11	Ashore	Nr. Honomisaki	Not stated
Highgate	Aug. 10	Collision	Bermuda	Leaking; pumps	Twyford	Aug. 30	Disabled	New York	Engine
Herdis	Aug. 28	Disabled	Elizabeth River	Not stated	Taijun Maru	Aug. 22	Aground	Port Adams	Not stated
Henrik Isben	Sept. 2	Collision	Rio Janeiro	Floated	Tarantia	Aug. 23	Collision	Marseilles	Frames; plates
Hendonhall	Aug. 20	Sank	Mesane Gulf	Floated	Usona	Aug. 15	Collision	River Rouge	Damaged
Havtor	Aug. 31	Aground	Great Yarmouth	Total loss	Urie	Aug. 23	Not stated	River Magdalena	Damaged
Ivy	Aug. 18	Fire	Yonkers	Not stated	West Carnifax	Aug. 17	Disabled	Philadelphia	Boiler
James McCue	Aug. 19	Sank	Mainadian, C. B.	Not stated	West Quechee	Aug. 10	Explosion	Galveston	Machinery
John A. Cooney	Aug. 27	Ashore	Halifax	Steering gear; deck; lifeboat	Willa Crosby	Aug. 24	Aground	Coos Bay	Floated
Joseph V. Vanderwaller	Aug. 26	Hvy. weather	Black Rocks	Not stated	Weser	Aug. 25	Ashore	Off Larne	Floated
J. O. Webster	Aug. 31	Ashore	Nr. Shelburne	Foremast; bowsprit	Westerner	Sept. 8	Collision	New York	Not stated
Joan Kielberg	Sept. 5	Gale	Greenwich	Sank	Yaye Maru	Aug. 21	Collision	Leghorn	Bowsprit; bow
Jess	Aug. 18	Collision	Calcutta	Stern tube					
Jalarashmi	Aug. 24	Hvy. weather	Liverpool Bay	Floated					
Jane Banks	Aug. 25	Aground	River Rouge	Damaged					
Kolkaska	Aug. 15	Collision	Randall's Island	Not stated					
Karibou	Aug. 17	Ashore							



# Marine Business Statistics Condensed

## Record of Traffic at Principal American Ports for Past Year

### New York

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
August, 1927	522	2,179,068	551	2,287,367
July	478	1,910,229	553	2,253,495
June	498	2,093,540	566	2,334,128
May	525	2,167,154	539	2,179,208
April	487	2,048,786	565	2,353,404
March	460	1,936,478	515	2,074,694
February	408	1,679,912	468	1,962,365
January	417	1,736,991	455	1,868,270
December	466	1,867,630	518	2,171,938
November, 1926	454	1,909,756	477	1,885,401

### Baltimore

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
August, 1927	181	390,713	138	408,083
July	128	384,450	130	368,096
June	125	375,204	125	376,019
May	112	333,395	117	340,274
April	131	409,145	127	377,039
March	120	355,162	117	323,893
February	100	308,501	95	301,401
January	117	362,553	126	361,277
December	245	722,141	269	783,058
November, 1926	292	818,707	298	853,723

### New Orleans

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
August, 1927	276	797,128	265	672,892
July	250	615,826	241	580,228
June	248	606,501	267	750,937
May	277	640,252	269	627,452
April	262	642,846	268	664,467
March	276	712,619	278	695,933
February	240	632,092	249	628,762
January	240	697,039	244	712,284
December	259	745,636	266	755,204
November, 1926	253	731,871	238	685,253

### Philadelphia

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
August, 1927	99	235,657	70	153,305
July	83	186,182	53	110,614
June	95	213,122	66	180,861
May	88	196,606	47	86,214
April	86	194,135	52	123,179
March	96	223,255	58	131,147
February	81	190,536	48	126,619
January	79	208,354	59	167,258
December	145	373,902	129	341,421
November, 1926	168	429,403	139	377,016

### Norfolk and Newport News

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
August, 1927	32	71,356	92	222,502
July	42	112,442	17	201,882
June	34	61,041	82	190,228
May	27	56,458	70	179,658
April	33	54,983	77	209,869
March	32	87,970	98	264,863
February	31	88,928	77	232,403
January	49	134,238	118	350,311
December	216	636,483	254	781,546
November, 1926	184	527,290	281	782,914

### Charleston

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
August, 1927	39	108,022	35	92,227
July	19	41,460	20	44,633
June	25	67,366	24	62,132
May	26	79,355	24	63,862
April	23	60,557	26	68,555
March	28	84,155	31	85,476
February	27	81,829	33	158,088
January	33	96,054	37	77,315
December	33	94,427	39	102,724
November, 1926	39	114,449	39	103,266

### Boston

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
August, 1927	149	441,819	96	285,255
July	147	401,008	103	326,695
June	155	344,548	99	242,957
May	130	318,196	100	262,982
April	120	343,388	72	201,868
March	95	301,413	59	187,556
February	83	277,063	40	119,246
January	88	266,147	51	159,241
December	97	286,013	52	170,314
November, 1926	89	275,245	56	177,876

### Savannah

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
August, 1927	39	107,763	34	96,410
July	38	107,763	36	104,445
June	40	97,689	33	102,822
May	50	115,821	39	98,521
April	46	120,271	42	113,706
March	42	97,563	30	76,030
February	33	88,673	27	71,040
January	43	106,733	36	95,000
December	36	96,175	32	85,198
November, 1926	37	104,323	36	105,821

### Galveston

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
August, 1927	43	114,628	82	248,364
July	47	146,318	97	318,609
June	56	147,040	103	302,474
May	64	180,917	118	359,948
April	47	112,816	118	352,203
March	52	139,219	127	368,302
February	55	129,477	131	389,482
January	60	164,241	116	352,290
December	53	119,497	72	186,444
November, 1926	28	65,578	61	180,449

### Portland, Me.

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
August, 1927	33	61,873	32	58,949
July	37	62,890	35	55,144
June	24	31,714	25	34,865
May	24	38,244	22	37,246
April	21	37,182	21	37,114
March	23	63,195	27	73,944
February	23	65,826	21	69,178
January	25	59,155	26	66,781
December, 1926	32	71,748	34	77,400

### Key West

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
August, 1927	72	81,247	70	84,132
July	78	84,790	79	84,186
June	84	97,585	85	97,535
May	105	113,030	108	115,564
April	78	79,818	74	75,913
March	80	91,602	75	93,700
February	90	101,179	84	102,571
January	89	116,112	89	119,191
December	92	113,985	87	104,448
November, 1926	97	116,965	97	115,032

### Los Angeles

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
August, 1927	160	483,069	214	473,702
July	121	452,983	106	407,695
June	178	484,561	125	418,976
May	161	470,471	138	456,885
April	179	477,762	173	441,374
March	156	451,428	165	442,022
February	144	418,190	144	404,753
January	137	420,426	138	381,692
December	155	438,464	123	386,004
November	184	439,738	138	387,987
October, 1926	187	448,038	155	421,807

### Providence

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
August, 1927	5	27,235	1	4,035
July	11	37,384	5	17,628
June	3	12,559	5	15,930
May	9	36,882	6	25,950
April	7	28,776	5	18,903
March	7	26,065	7	25,780
February	3	10,380	6	23,696
January	3	9,632	6	20,091
December	5	17,666	5	19,074
November, 1926	2	7,689	2	7,690

### Mobile

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
August, 1927	92	194,609	84	184,655
July	94	198,668	89	190,965
June	97	206,410	84	165,649
May	114	237,650	103	205,876
April	107	240,273	108	218,246
March	107	217,848	98	197,395
February	99	249,158	86	199,907
January	96	224,819	83	191,752
December	82	164,129	82	174,618
November, 1926	90	200,301	83	182,839

### San Francisco

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
August, 1927	176	636,152	150	583,653
June	154	556,225	140	526,976
May	148	545,414	137	510,560
April	141	531,380	137	518,577
March	145	555,324	148	586,354
February	147	561,214	138	513,253
January	133	497,560	141	522,806
December	134	520,962	134	500,347
November	128	543,103	139	512,671
October, 1926	145	532,024	153	575,263

### Portland, Oreg.

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
July, 1927	31	110,966	35	119,824
June	24	91,554	33	118,631
May	24	86,618	28	98,277
April	31	120,431	44	169,247
March	21	78,379	31	106,768
February	15	63,320	28	106,355
January	29	102,736	39	134,127
December	34	131,426	56	213,861
November	34	135,455	48	173,820
October, 1926	41	151,013	59	217,745

### Seattle

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
August, 1927	109	218,218	102	203,902
July	45	183,023	40	162,121
June	38	159,687	39	162,632
May	41	177,869	42	169,083
April	46	186,581	49	185,593
March	39	159,034	44	175,937
February	40	170,776	45	195,692
January	53	233,914	47	192,233
December	42	176,065	54	201,988
November, 1926	63	234,742	54	231,343

### Port Arthur

Month	Entrances—		Clearances—	
	No. ships	Net tonnage	No. ships	Net tonnage
July, 1927	21	61,871	34	102,998
June	15	46,223	28	83,926
May	26	57,645	40	107,757
April	20	47,739	23	58,802
March	34	80,083	31	84,324
February	22	57,644	28	84,631
January	25	72,885	31	100,184
December	25	67,293	31	96,171
November	19	58,558	23	71,270
September, 1926	15	43,874	22	72,960

# Reviews of Late Books

*Hints To Up-To-Date Navigators*, by Oswald M. Watts A.M.I.N.A. master mariner; cloth, 168 pages, 5 x 7 inches, published by Crosby Lockwood & Son, London, and furnished by MARINE REVIEW Cleveland for \$1.75 postpaid and in Europe by the Penton Publishing Co., Ltd., Caxton House London, for 7s. 6d.

This little book would appear to be very useful to the junior officer who is taking his profession seriously and desires to adopt every means to advance his knowledge. It is intended by the author to contain the requirements of a modern ship's officer in addition to and to supplement the board of trade examination guide books.

No less than 100 general knowledge questions and answers are listed. There is also a chapter on weather forecasting. The author emphatically states that it is not the intention or thought in any way to rival the famous *Lucky's Wrinkles* or many other fine books on the subject. It is intended, rather, by this book to interest the sailor and junior officer to continue their studies in the more complete books on the various subjects touched upon.

There are in all 15 chapters. The titles of several of these follow: Useful Weights and Measures; Practical Navigation; Nautical Instruments; Nautical Astronomy; The Ship and Its Construction; Ship's Business and Deck Work. This book is full of valuable information and it is bound to be of real practical assistance to any sailor man who wants to master his profession.

*Bulk Cargoes*, A treatise on their carriage by sea and consequent effect on the design and construction of merchant ships, by A. C. Hardy, A.M.I.N.A.; cloth, 160 pages, 6 by 9 inches; published by D. Van Nostrand Co. New York, and furnished by MARINE REVIEW, Cleveland for \$6.00 postpaid, and in Europe by the Penton Publishing Co., Ltd., Caxton House, London for 30 shillings.

In this book Mr. Hardy has given to the reader a clear and important discussion on how bulk cargoes are carried and in what ways the nature of the bulk cargo has affected the design and construction of vessels. It is a valuable work to anyone in any way connected with the transport by water of bulk commodities. It is a compilation in one compact source of information which hitherto has been widely scattered.

The author in his preface outlines

the steps leading to the preparation of this book. He points out that frequently questions come up of importance in connection with the type of vessel used in the movement of bulk cargoes. It is as an answer to these numerous pertinent questions that the present book has been prepared.

Perhaps the best way of conveying the scope of this book is to list a few of its eleven chapters as follows: The Bulk Freighter: Points of design; Stability and Trim; The Oil Tanker; The Collier; The Ore Carrier; The Grain Carrier; The Self-Unloading Freighter; Bulk Transport on Inland Waterways and Bulk Transport on the Great Lakes.

As the author himself says in his preface in referring to this book "it has been written primarily from the point of view of the naval architect, for students of naval architecture, consultants, charterers, and underwriters, its *raison d'être* being to discuss the effects which the principal bulk cargoes have upon the design and construction of seagoing ships and also how the necessity for the carriage of bulk cargoes on rivers and canals has brought about special types of barges and river craft".

The book is printed in large clear type on good paper and the text is well illustrated by a number of diagrams and photographs. It is interestingly written and contains a great deal of valuable information.

*American Ship Types*, A review of the work, characteristics and construction of ship types peculiar to the waters of the North American continent, by A. C. Hardy, A.M.I.N.A. cloth; 262 pages 6 inches by 8½ inches; published by D. Van Nostrand Co. Inc. New York, and furnished by MARINE REVIEW, Cleveland, for \$5.00 postpaid, and in Europe by the Penton Publishing Co., Ltd., Caxton House London for 25 shillings.

The author has in this volume contributed an interesting discussion on the peculiarly American types of vessels adapted to the country's special requirements. The object of the book, according to the author, is to present the subject of American ship types in perspective, showing the number of domestic types, their principal characteristics, and the interrelation of one type with another. He shows how the configuration of the American seaboard, the location and physical formation of the principal rivers and the Great Lakes and the

necessity for the transport of peoples and merchandise from port to port along their length has given rise to the need for the many different classes of ships which go to make up the American domestic mercantile marine. It is pointed out how the characteristics of nature have imposed limiting conditions on the construction of the various ship types. This book is printed in clear type on excellent paper and there are a large number of half tone and line illustrations. There is in all fifteen chapters. A number of chapter headings may be listed to show the scope of this book, as follows: Outlined Geographical Survey; Great Lakes and Inland Waterways; All Types of Coastwise Shipping; Bay and Sound Shipping; Mass Transportation of Humanity; Railroads as Ship Owners; Four Big Groups of Ferry Boats; Towboats for Various Duties; River Push Boats and Packet Boats; Transportation of Freight Cars; Great Lakes Passenger Traffic; Three Big Groups of Dredges; and Light Vessels and Light Tenders.

All together American Ship Types represents an interesting and valuable compilation of distinctly American types of vessels and is interesting and useful to the naval architect and marine engineer and to the practical operating man in giving them an overall picture of many varieties of vessels for many widely different services.

## Order Large Yacht

The Pusey & Jones Co., Wilmington, Del., in the latter part of August received a contract to construct a yacht for Samuel A. Salvage, New York. The vessel is to be completed by next May and will be 150 feet long with a beam of 29 feet. She will be equipped with twin screw diesel engines and it is expected will make a speed of 15 knots. The total cost will be about \$400,000.

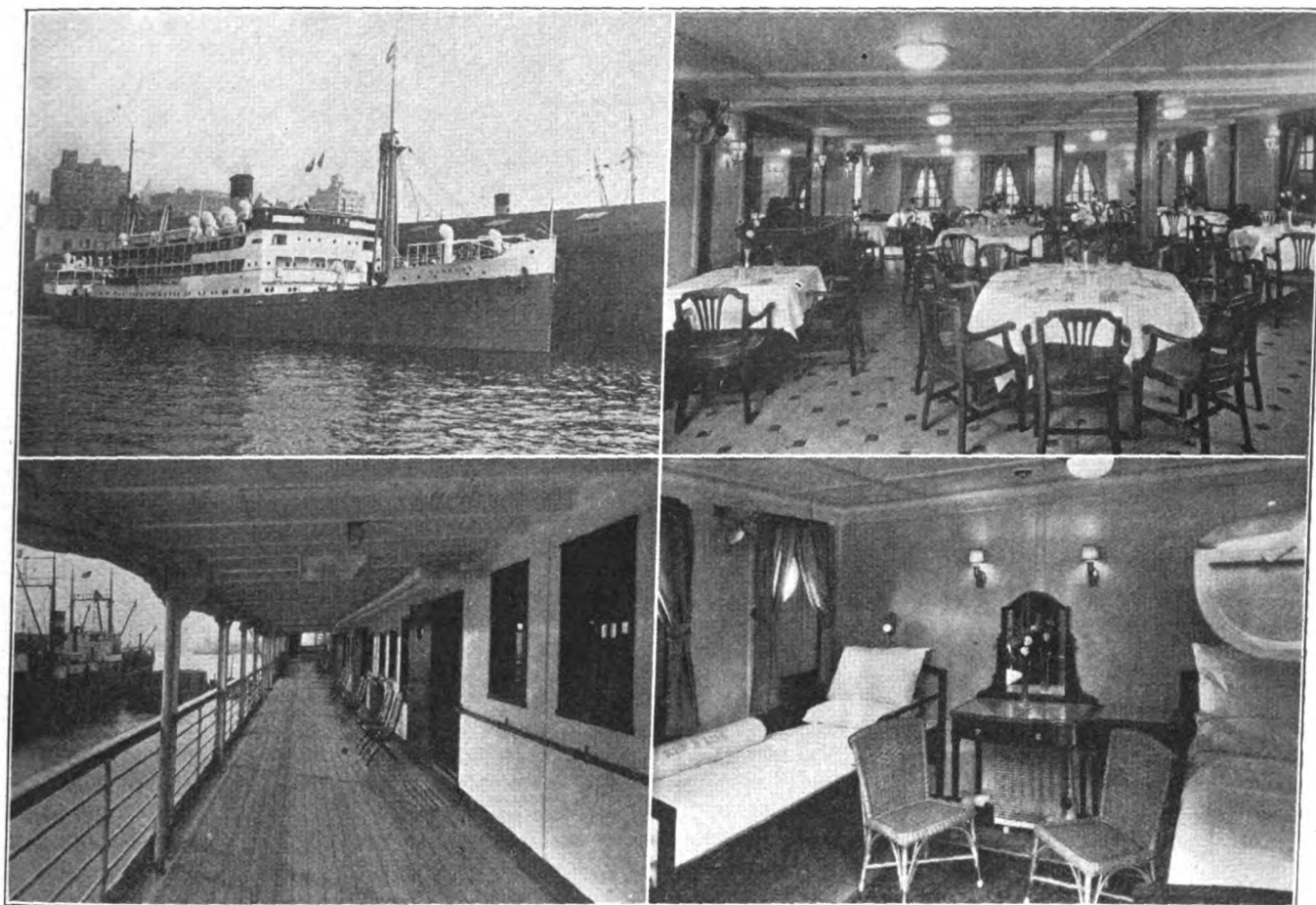
## Motorships Sold

A group of New York shipping men have purchased the motorships ASH-BEE and JACKSONVILLE, each of 3400 tons, formerly owned by the American Brown Boveri Electric Corp. It is reported that they are to be used in the South American trade.

## Twin Cities in Fast Run

Making a record passage of four days 22 hours and 20 minutes the diesel electric barge canal vessel TWIN CITIES of the Detroit & New York Transit Co., demonstrated the possibilities of such service.

# Red D. Liner Caracas Enters Service



*Twin Screw Passenger and Cargo Steamship Caracas, Built by the Newport News Shipbuilding and Dry Dock Co. for the Red D Line for Service between New York and Venezuela. Upper Right—Dining Room. Lower Left—Promenade Deck. Lower Right—First Class Stateroom*

THE recently completed, twin screw, passenger and freight steamer CARACAS started on her maiden voyage from New York to Venezuela on Sept. 14. The CARACAS was designed by Theodore E. Ferris for the Red D Line of New York and was built by the Newport News Shipbuilding & Dry Dock Co. She was launched on June 30, the sponsor being Mrs. Elizabeth A. Dallett, daughter-in-law of President Frederic A. Dallett of the Red D Line. Long experience in the design of vessels for this service enabled Mr. Ferris to create a vessel which is primarily and particularly suitable.

The principal dimensions are as follows: Length overall at 18-foot water line, 335 feet 6 inches; length between perpendiculars, 323 feet; depth molded to upper deck, 22 feet; displacement at 18 feet, 6460 long tons; deadweight capacity at 18 feet, 3560 long tons; designed speed at 16 feet draft, 13 knots.

Propelling machinery in the CARACAS consists of one set of Newport News impulse turbines, one high

pressure and one low pressure, ahead, in series. Each turbine drives the pinion of its own single reduction gear communicating with its own shaft and propeller, the high pressure driving the starboard wheel and the low pressure the port wheel. At 1800 revolutions per minute of the turbines a total of 3500 shaft horsepower is developed at a propeller speed of 125 revolutions.

Two Babcock & Wilcox water tube boilers are used. The working steam pressure is 275 pounds per square inch, and there is superheat of 100 degrees. Total heating surface is about 10,500 square feet and the superheat surface is about 1575 square feet. The grate surface of 212 square feet has 7-foot length of grates. The boilers operate under forced draft and burn oil.

Sea trial results gave a high speed of 16.34 knots and the highest power development was 3995 shaft horsepower. The average result for a number of runs was 15.32 knots at 3965 shaft horsepower and 133.4 average revolutions per minute, with

a slip of 11.5 per cent. Six nozzles on the turbines, full power, was used.

Classed in the American bureau, this vessel is substantially constructed with many safety features. There are accommodations in well arranged and attractively appointed quarters for 115 first-class passengers, in suites, special and ordinary state-rooms. In the house on the poop deck are accommodations for 25 passengers. The crew on this vessel consists of about 80 men. The public rooms are very well laid out and the workmanship and finish is of the finest.

An unusually large refrigerating plant is installed consisting of two Brunswick-Kroeschell eight-ton vertical double cylinder, single acting machines driven by this company's special marine type steam engines. The plant will cool 1800 cubic feet of cargo space for frozen meat and 2700 cubic feet of ships cold storage spaces. There are many other interesting items in connection with this ship and everyone anticipates her complete suitability.



# What the British Are Doing

Short Surveys of Important Activities in Maritime  
Centers of Island Empire

A WELCOME revival is reported in the shipbuilding industry. During the month of August Clyde shipbuilders launched 17 vessels of 37,695 tons as compared with 20 of 20,309 tons in July and 28 of 40,465 tons in June. The total for the eight months consisted of 137 vessels of 203,175 tons, as compared with 100 of 203,149 tons in the corresponding period of last year, and 153 vessels of 389,731 tons in the first eight months of 1925 and 142 vessels of 440,174 tons in the best corresponding period on record, that of 1920. The Northeast coast is busy, and at Barrow 11,000 men are being employed by Vickers Ltd. which lately finished the 10,000 tons cruiser H. M. S. CUMBERLAND, which has sailed for Belfast preparatory to her trials. Two troopships are nearly completed and operations have been commenced on a new repair ship, a large depot

ship for submarines and three large submarines for the navy. A new Orient liner is to be launched by Messrs. Vickers early in the autumn.

\* \* \*

THE new contracts reported in August included two cargo steamers to be built by Barclay Curle & Co. Ltd., Whiteinch, for the Haun steamships Co. Ltd., Cardiff, and passenger and cargo steamers of 5000 tons gross to be built by William Denny & Brothers Ltd., Dumbarton, for P. Henderson & Co., Glasgow; and a cargo steamer of 6500 tons to be built by the Ayrshire Dockyard Co. Ltd., Irvine, for George Nisbet & Co., Glasgow.

\* \* \*

THE shipbuilders have been considering the bearing of the new rebate on their costs and they estimate that they will have to pay 5s a ton more for plates and £1 7s 6d

per ton more for sections, than the cost delivered, of Continental material. They consider they will be largely compensated by the better deliveries obtained from home makers, the fact that supplies can be delivered in comparatively small instalments as required, and the absolute assurance of high quality.

\* \* \*

THE largest ship ever ordered from Teesside builders has been placed with the Furness Shipbuilding Co. at Haverton Hill. It has overall length of approximately 540 feet, a beam of 70 feet and a molded depth of 38 feet 9 inches. The vessel will carry about 16,000 tons dead weight. Twin sets of 6-cylindereed diesel engines built by Krupps of Essen will give her a cruising speed of 12 knots. The Imperial Oil Co. of Toronto, Canada, have placed the order. The keel is soon to be laid.

## What's Doing Around The Lakes

WHILE the passenger excursion business on the Great Lakes has subsided due to the passing of the vacation season, most passenger lines are maintaining good seasonal services to and from most of the important passenger points. The unusually warm September weather was favorable to late season passenger business. The Goodrich Transit Co., Chicago, has laid off several of its excursion boats for the season but still is maintaining daily service between Chicago and Milwaukee, Muskegon, South Haven, Grand Haven, Holland, Mich., and Benton Harbor.

\* \* \*

FRUIT shipments from the Michigan fruit belt likely will fall short of expectations this season, it is stated by officials of the Great Lakes transportation companies serving that area. Last season fruit shipments were unusually heavy, and this season's movement, of course, will not attain the high mark of a year ago. Indications were that the volume of

fruit to be handled by Great Lakes vessels this year, however, would be fairly satisfactory.

\* \* \*

ANNOUNCEMENT is made that Edward E. Taylor has been appointed general manager of the Goodrich Transit Co., with entire management of the operating, passenger and freight traffic departments. As a captain, Mr. Taylor was in active service with the Goodrich company for many years prior to becoming general superintendent of the former Graham & Morton line, with headquarters at Chicago. Following the merger of the Graham & Morton line with the Goodrich line, he became assistant general manager of the latter.

\* \* \*

VAST savings through the building of compensating works in the St. Clair and Niagara rivers are cited as possible by the American-Canadian joint engineering board in an amended report on its studies of the St. Lawrence waterway. The amended report

deals particularly with the losses to Lakes Michigan and Huron caused by the Chicago diversion and the enlargement of the St. Clair river. It is stated in one of the reports that if compensating works were constructed which would care for the diversion at Chicago and losses caused by Canadian gravel dredging and other diversions, a saving of from \$1,250,000 to \$2,000,000 would be effected in the costs of deepening interlake channels to conform with the proposed St. Lawrence waterway. Raising of the lake levels may save as much as \$5,000,000 in the cost of harbor works likely to be undertaken by Canada and the United States, it is pointed out.

\* \* \*

THE steamer L. E. BLOCK, named for the chairman of the board of the Inland Steel Co., Chicago, arrived at Indiana Harbor recently with a record cargo of limestone from Calcite, Mich., carrying 15,622 gross tons. Heretofore 12,000 gross tons has been considered a good cargo of stone.

The vessel was built about a year ago and has been carrying ore, this having been its first trip to Calcite for stone. It is the largest capacity vessel that has gone into Calcite and is one of the largest of the lake freight boats. The vessel is captained by Joseph Matthews.

\* \* \*

**S**HIPMENTS of finished steel products on the Great Lakes from eastern mills to Chicago have become more regular in the past several weeks. These cargoes have been coming from Buffalo. Chicago steel producers in turn have been shipping finished steel

to Montreal for Canadian consumption, but the latter movement is not heavy. Several cargoes of pig iron from Cleveland and Buffalo also have been received by a Chicago brokerage concern, for sale in the Chicago-Milwaukee district. Reports are that other cargoes will be shipped for direct delivery by a Buffalo steelworks furnace unit.

\* \* \*

**C**ERTAIN harbor enlargements will become necessary with the deepening of lake channels. The figures show that a saving of \$1,250,000 will be effected in providing channels 25

feet in depth through and between the lakes by including compensating works rather than accomplishing the deepening work by dredging only. The government engineers contemplate the raising of the present levels of Lakes Michigan and Huron by one foot if the construction of compensating works is decided upon. It is declared that it would be necessary to compensate for the loss of six inches, which the engineers say is caused by the Chicago diversion, and the loss of about six inches in channel enlargements in the St. Clair river by Canadian and other gravel dredging.

## Ocean Freight Rates

Per 100 Pounds Unless Otherwise Stated

Quotations Corrected to Sept. 20, 1927 on Future Loadings

NOTE: FREIGHT RATES STEADY WITH SOME INCREASE

New York to	Grain	Provisions	Cotton (H. D.)	Flour	General cargo cu. ft.	100 lbs.	Finished steel	REMARKS	From North Pacific Ports to	Lumber Per m. t.
Liverpool.....	2s 6d†	\$0.60	\$0.40	0.23	\$0.50	\$0.90	\$8.00T***	Fair	San Francisco.....	\$4.25 to 4.50
London.....	2s 6d†	0.60	0.40	0.23	0.50	0.90	8.00T***	Fair	South California.....	4.50
Oslo.....	\$0.20	0.45	0.50	0.30	0.42½	0.85	8.00T	Fair	Hawaiian Islands.....	9.00 to 10.00
Copenhagen...	0.20	0.45	0.50	0.30	0.50	1.00	8.00T	Fair	New Zealand.....	16.00 to 19.00
Hamburg.....	0.15	0.55	0.40	0.25	0.50	0.90	10.00T	Good	Sydney.....	13.00 to 13.50
Bremen.....	0.17	0.35	0.50 to 65	0.25	0.50	0.90	10.00T	Fair	Melbourne-Adelaide....	13.50 to 14.00
Rotterdam and Amsterdam....	0.14	0.32½	0.40	0.23	0.45	0.80	9.50T	Fair	Oriental Ports.....	
Antwerp.....	0.14	0.32½	0.40	0.20	0.45	0.80	9.50T	Fair	Oriental Ports (logs)...	15.00 to 16.00
Havre.....	0.14	0.55	0.50	0.30	0.45	0.80	9.00T	Very quiet	Peru-Chile.....	13.00 to 15.00
Bordeaux.....	0.14	0.55	0.50	0.30	0.45	0.80	9.00T	Very quiet	South Africa.....	20.00 to 22.00
Barcelona.....		0.50	0.30	10.00 bags	—12.00T—		10.00T	Quiet	Cuba.....	16.00 to 17.00
Lisbon.....		0.75	0.50	8.00T bags	—23.00T—		8.00T	Poor	United Kingdom.....	80s to 95s
Marseilles.....		0.65	0.40	7.00 bags	—23.00T—		8.00T	Poor	United Kingdom (ties)...	
Genoa.....	0.18	14.25	0.50	9.00	—23.00T—		11.50T	Fair	Baltimore-Boston range..	\$13.50 to 14.50
Naples.....	0.18	14.25	0.50	9.00	—23.00T—		11.50T	Fair	Florida Range.....	No rates
Constantinople..	0.27	20.00T	0.85	0.40½	—24.00T—		11.50T	Quiet	Buenos Aires.....	15.00 to 17.00
Alexandria.....		20.00T	0.85	0.40½	—24.00T—		11.50T	Quiet	North of Hatteras.....	
Algiers.....		0.85	0.60	0.45	—23.00T—		11.50T	Poor	China.....	10.00 to 10.50
Dakar.....		17.00		15.50T	—23.00T—		11.50T	Good	Japan.....	9.00 to 10.00
Capetown.....		18.00		13.00	20.00	13.00 to 18.00		Good	Japan (logs).....	13.00 to 14.00
Buenos Aires.....		22.00T			20.00 to 22.00T†	8.00 to 8.80T		Good	Flour and Wheat	
**Rio de Janeiro		22.00T			20.00 to 22.00T†	7.00 to 7.70T†		Good	U. K. and Continent	
Pernambuco.....		22.00T		9.00T	—22.00T—†	9.70T†		Good	(gross ton).....	33s 9d to 35s 0d
Havana.....	0.35*	0.50		0.35*	0.61	1.33	10.00	Fair	Oriental Ports (net tons)..	\$4.25 to 4.75
Vera Cruz.....	0.25	0.30	0.35	0.25	0.52½	1.05	0.30 to 0.35	Fair		
Valparaiso.....		1.07		0.70			10.00T	Fair		
San Francisco...		0.35 to 0.70		0.40 to 1.10			0.25 to 0.30	Fair		
Sydney.....		18.00T	1.25	18.00T	18.00-24.00T	9.00 to 12.—T		Very good		
Calcutta.....				10.00T	—16.00T—	10.00T		Fair		

T—Ton. †Per quarter of 480 lbs. ‡Landed. ††Heavy products limited in length. \*Extra charge for wharfage. \*\*Plus \$0.50 surcharge on all rates to Rio de Janeiro on account of congestion. \*\*\*Plus 15 per cent.

### Principal Rates To and From United Kingdom

	s	d		s	d
Grain, River Plate to United Kingdom..	24	6	Pig iron, United Kingdom to New York or Philadelphia.....	12	6
Coal, South Wales to Near East.....	10	0	Iron ore, Bilbao to Cardiff.....	6	9
Coal, United Kingdom to Buenos Aires..	13	0	Iron ore, Huelva to Phila. or Balto.....	11	6
Manganese Ore, Poti to Philadelphia...	\$3.75				

## Bunker Prices

### At New York

	Coal alongside per ton	Fuel oil alongside per barrel	Diesel engine oil alongside per gallon
Nov. 19, 1926	7.00@7.50	1.81½	5.87c
Dec. 20.....	6.25@6.50	1.81	5.86
Jan. 19.....	5.90@6.15	1.81½	5.87
Feb. 18.....	5.25@5.50	1.81½	5.95
Mar. 18.....	5.25@5.50	1.81½	5.95
Apr. 19.....	5@5.50	1.75	5.71
May 19.....	5.65	1.81½	5.63
June 18.....	5.50	1.71½	5.39
July 19.....	5.65	1.65	5.24
Aug. 19.....	5.50	1.71½	5.15
Sept. 20, 1927		1.65	5.04

### At Philadelphia

	Coal trim. in bunk per ton	Fuel oil alongside per barrel	Diesel Eng. oil alongside per gallon
Nov. 19, 1926	7.00@7.50	1.80½@1.81	5.43@5.88c
Dec. 20.....	5.50@5.75	1.80@1.90½	5.64@6.19
Jan. 19.....	6.20	1.95@1.95½	5.88@6.19
Feb. 18.....	5.24@5.50	1.90@1.91	5.64@6.13
Mar. 18.....	5.24@5.50	1.95@1.95½	5.38@5.88
Apr. 19.....	5.15@5.65	1.81@1.86	5.38@5.64
May 19.....	5.15@5.65	1.75½@1.76	5.14@5.38
June 18.....	5.00@5.25	1.70	5.12@5.14
July 19.....	5.00@5.25	1.65@1.70	5.10@5.12
Aug. 19.....	5.25	1.70@1.71	5.12@5.14
Sept. 20, 1927.	5.25	1.62@1.65	5.12@5.13

### Other Ports

Boston, coal, per ton....	\$7.94
Boston, oil, f. a. s., per barrel.....	\$1.80
Hampton Roads, coal, per ton, f.o.b., piers \$4.35 to 4.50	
Sept. 9 — Cardiff, coal, per ton.....	14s 0d
London, coal, per ton.....	—s—d
Antwerp, coal, per ton. 21s 6d	
Antwerp, Fuel oil, per ton 80s 0d	
Antwerp, Diesel oil, per ton.....	95s 0d
British ports, Fuel oil... 80s 0d	
British ports, Diesel oil... 95s 0d	

NOTE: Lighterage rates on fuel in New York reduced from 6½ to 5½¢ per barrel. The coal strike in Britain is now settled and freight rates or bunker prices for coal or pig iron are again quoted.

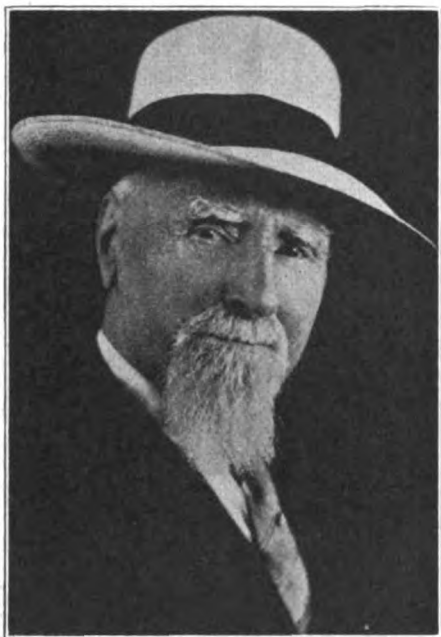
General cargo rates to Havana change daily and are omitted for the time being.

Rates to Calcutta are subject to change without notice. Cotton goes only to Bombay. Landing charge of \$2.00 per freight ton at Valparaiso.

# Personal Sketches of Marine Men

Capt. Robert Dollar, President Dollar Steamship Co.

By C. Laurence Smith



*AN INNATE practical common-sense combined with an iron constitution, driving energy, indomitable courage, and reasoned optimism are a part of his equipment.*

*AROUND him gathers naturally the glamor and romance with which the imagination of man inevitably endows a great leader. In a real sense he has never submitted to defeat.*

*HONORED, respected and loved, by all who know him, for his sterling qualities; at the age of 83, he continues active and faces the future with a keen spirit of enterprise.*

**A**N INTERVIEW had been arranged with the King of Pacific coast shipping and the largest individual ship owner in the United States, Capt. Robert Dollar, and just to open the conversation I asked the captain to tell me his ideas of the Chinese situation.

To look at Captain Dollar's snow white hair and his dignified mien, as he sat there in his office which overlooks the San Francisco bay where his big President type ships come and go, one might have expected the usual prosy, exposition of theories and policies. But when I ventured a second glance I found that I had set off a fuse to a hidden cache of t.n.t. Looking a bit closer and more carefully I noticed an ominous quiver of those celebrated white chin-whiskers! Captain Dollar was mad, clear through!

Yet quietly, restrainedly he took a copy of a cablegram from a sheaf of papers.

"Got this marked 'confidential' from our Tientsin office," he explained, and read it:

"'American minister and consul general after conference have instructed Americans leave soon as possible. Anticipate serious trouble.'"

At this point Captain Dollar expressed himself with great vigor: "That got my Scotch up! The idea of the government telling me I've got to get out of China! Before I'd get out of China I'd tell the government to go to."

"Here's the cablegram we sent back to Tientsin:

"We can't consent to vacate parts of China and desert American interests. We are in China to stay permanently and the American government must protect us.'"

That in brief is what Capt. Robert Dollar, and back

of him the Dollar Steamship Co. thinks about the Chinese mess.

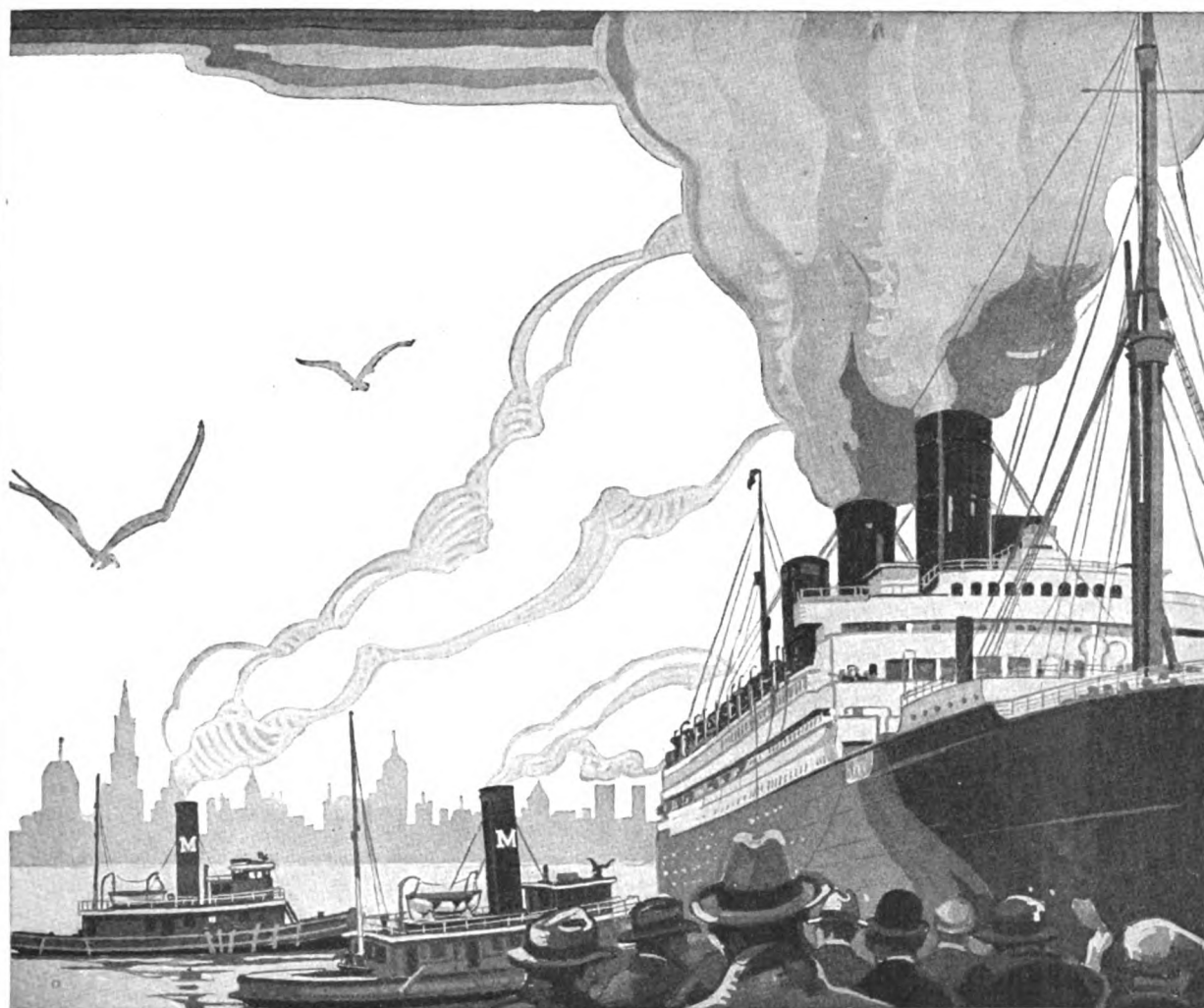
It is but a glance into the indomitable courage of the veteran shipping magnate who has, as he calls it, "clawed" his way from a kitchen flunky in a lumber camp to the ownership of the largest steamship fleet carrying the American flag. He is 83 years old now but still going strong. And as proof of this, he recently returned from a "round the world" business trip on one of his liners.

Captain Dollar hasn't time to sit and tell of his experiences here and there on his upward journey through hard labor and finance, but this day was rather a spring masterpiece and perhaps even masters of capital get the spring fever, so he leaned back in his chair, fastened his eye on a white ferry ploughing its way eastward across San Francisco bay and began.

"Falkirk, Scotland, was my birthplace, and the year was 1844. I was 14 when my father brought his family from Glasgow to Quebec on the sailing ship *Anglesia*, a passage that occupied five weeks. Two years earlier I had taken my first job, feeding a lathe in a machine shop. It paid me half a crown, or about 60 cents, for a week's work; and 71 years after taking that first job I find the following note written on the last page of my 1926 diary:

"I closed this year by putting in a full day's work, and went home satisfied that I had done my best during the year. Not that I have done well nor that I have accomplished all that I might have done, but by persistent hard work I can safely say that I have given the best that was in me for the cause of Christ, and in my business I have striven to increase and develop American foreign commerce.





## *The Handling of Great Transatlantic Liners*

**T**HE delicate operation of putting a heavily laden transatlantic liner safely and gently into her dock is one of the several marine activities in which this Organization excels.

For sixty-five years Moran Service has anticipated the trend that has brought substantial increases in unit tonnage as the facilities of the Port of New York has been augmented to receive it, and has kept abreast of demands by the enlargement of its own fleet and equipment to meet each condition and satisfy every requirement of owners and operators.

Indeed, Moran Service has always felt the responsibility of leadership in maintaining the traditions of efficiency that are so characteristic of the Port.

*Moran Marine Experts are gratuitously at the service  
of owners and operators for consultation and advice*

MORAN TOWING & TRANSPORTATION CO., INCORPORATED  
17 BATTERY PLACE, NEW YORK  
Whitehall 1940

# MORAN Service



MARINE REVIEW—October, 1927

45

"My working life, therefore, has to date spanned a little more than three-score and a half years. Within my recollection the first Atlantic cable was laid; the telephone was introduced; wireless has been developed; improvements in the use of steam have been very great; the propeller has been perfected and has superseded the paddle steamer.

"These are great changes. But young men now living will survive others on a vaster scale, involving the commercial and industrial development of countries where the surface as yet has been little more than scratched.

"From 1858, when I secured a job in a Canadian lumber camp at ten dollars a month, until 1888, I was continuously engaged in the lumber business in various parts of Canada and Michigan. By the late 'eighties good, large timber was getting scarce in Michigan and the profits were diminishing every year, so I moved to California. In 1893 I started a mill in Mendocino county, on the Pacific slopes of California, and ran it for six years. During this time I found it very difficult to get vessels to carry our lumber. I started investing in vessel property and contracted to get several vessels built, employing them in our own service in the coastwise trade.

"It was not until 1901 that I made my first venture in the China trade.

"I began by buying a 6500-ton steamer. At that time the lumber was being carried to Japan and China in slow sailing vessels; my ship on her first voyage carried a cargo at rates much lower than the sailing vessels were getting, therefore we lost money. In fact we soon found that if we intended to stay in the business we would have to furnish our own cargo. Consequently I bought other sawmills and thereby provided our ship with a full cargo westward. I also found that if we were to maintain the line we would have to have an organization at both ends so in July, 1902, Mrs. Dollar and I sailed for our first trip to the Orient.

"We visited both Japan and China. I carefully looked over the field, and opened a small office in Shanghai. That was starting on a very small scale. But that is my ideal, born of experience; start on a small scale and work up from a sure foundation. In Japan, this preliminary trip, I noticed the quality of the oak timber I saw, and bought six railway ties and took them to San Francisco. This was the first oak taken from Japan to the United States.

"We tried out these pieces of oak by making them into furniture, which proved highly satisfactory. We then made large contracts for oak ties for the Southern Pacific. Later we developed a trade for oak for the manufacture of furniture. This started the furnishing of cargoes for the eastward trip of our steamers.

"I discovered that a ship sent to the Orient became a drummer for trade, not only for the goods that she carried there but for a cargo for the return trip. Now in all of our foreign offices when a ship is unloaded and hasn't a full cargo for the return voyage our representative cables us the tonnage needed and what can be bought at that port. Say our representative can buy hemp in Manila at a certain price. We at the home office know the price hemp will bring in the United States. If it can be sold here at an advantage great enough to give us a profit, possibly only enough for reasonable freight rates, we consider it good business to buy and so complete the cargo, for the most expensive freight is wind and air.

"The growth of our business is but a part of the general advancement of the Pacific coast. Eighty years ago the western coast of the United States was a wilderness,

with only a scattered population of a few white men; less than 50 years ago the first steamship crossed the Pacific ocean from America to China. Tonnage has increased by leaps and bounds and I believe that within a few years the tonnage of the Pacific will exceed that of the Atlantic.

"Through Pacific shipping new products have been brought into commerce. Not long ago soya beans were never taken out of China and sesamum seed was not even known; now China's combined exports of these products run into millions of tons and dollars each year.

"I arrived in China at the time of the revolution which turned the country into a republic. Trade was at a standstill so I sent a ship to Manila. It was at once loaded with copra and mahogany. Immediately an absolutely new American trade was established. Before I returned to the United States I sent another ship for a cargo and it was loaded. Since then my ships have made regular trips and returned with full loadings.

"But incidents and figures do not convey the full picture of the commercial possibilities. Leaving all the rest of China out of the picture, let me just suggest briefly the wonderful richness and resources of a portion of the country; the land bordering the Yangtse river and its tributaries, running through the rich heart of China.

"Roughly a seventh of the human race dwells there. Like the Nile, the Yangtse is a great silt-bearing stream which overflows yearly and furnishes the lands with rich growing soil. One sails up the river for 1600 miles, through cities containing millions of population.

"I do not hesitate to say that I firmly believe the Yangtse river valley will yet be the greatest steel producing country in the world.

"It is of national significance, vital to the shipping industry and the mercantile marine of America, how we view this great, nearly virgin field of commerce—whether our merchants and manufacturers and farmers regard foreign trade seriously, not merely hopping in and hopping out when the mood strikes them or when the going becomes tough; and whether the question of a merchant marine, a fleet of cargo vessels flying the American flag, is to be treated constructively or destructively by those who have in their power the making or breaking of it.

"Foreign trade is not a subject narrowly confined to one group of interested individuals. The people who are concerned are many. If carried on properly, foreign trade is only an exchange of commodities. It is necessary to buy in each country as much or nearly as much as is sold there. It is very nice to have the balance in our favor, and the European war made us the biggest creditor in the world; but that is not altogether profitable.

"Just to give you an idea of how the Chinese look at that—we sometimes think they do not know much over there!—I was trying at one time to put through a deal with the Chinese government by buying iron ore and pig iron from them. We came to a deadlock, and, as they desired to send me off in good humor, they gave me a banquet. They said they were sorry that they could not meet my terms, but, as I could not come up on my terms we would have to agree to disagree. As a parting shot I said:

"Remember one thing, gentlemen, up to the present time I have done many millions of dollars of business in China, and I have yet to take the first dollar of your money away from you or the country. I have even bought more than I have sold to you."

"We were just ready to go into the banquet room, when they said: 'Sit down a minute,' and they began

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# For *Diesel Engine* Lubrication—



## The *Right Oil* at Ports of Call means “ship-shape-going” en route

The lubrication requirements for Marine Diesel Engines are just as exacting, and more important, than those for stationary Diesel Engine units ashore.

In the matter of *selecting* the lubricant which will best meet these requirements the Marine Engineer is confronted with a condition which applies to him alone.

If anything goes wrong—too much oil consumption—or abnormal power loss—if the bear-

ings run hot or the pistons stick (and any of these can happen with the wrong kind of oil) the Marine Engineer must make the best of it and “ship with his trouble” until he reaches the nearest port for replacement oils.

Thus, it is important that the oil selected for Marine Diesel lubrication be “right” at the start.

To many Marine Engineers today, and to *builders* of the most prominent Marine Diesel installations, the right oil for Diesels means:

## TEXACO URSA OIL

This Diesel Engine lubricant is also being used on four of the nine motor vessels of the U. S. Shipping Board and on mercantile and naval vessels throughout the world.

Ask to see a sample of this pure, clean, clear oil.

Undoubtedly the finest Diesel Engine lubricant on the market today, it is con-

tinually establishing new records in low oil consumption, in bearing and cylinder wall protection and in operating efficiency.

The Texas Company's Diesel Engine specialists are ready to render you the fullest cooperation toward equally noteworthy Diesel Engine operation, any time, anywhere, and without obligation of any kind.

STOCKS KEPT AT PORTS THROUGHOUT THE WORLD

### THE TEXAS COMPANY

*Marine Sales Division*

Dept. KX, 17 Battery Place, New York City

*Offices in Principal Cities*





to talk. I didn't understand what they were saying but they all had something to say. The president of the republic finally said to me: 'I have been trying to form an answer to that last remark of yours, and we have utterly failed, so we have decided to give you our products at the price you have named because we cannot afford to do without the exchange of commodities that you are giving us.'

"My ships carry the American flag. I feel in doing business under another flag, like the man who is doing business under his wife's name! I am buying ships—all that I can get at the right price—and I have given my promise that I will continue to do all that I can

to keep them under the American flag."

And Captain Dollar, a grizzled, white-haired he-man, "skipper" of America's greatest merchant fleet, clicked his heels to the floor, stood up and touched an ivory button on his desk. A neatly dressed young lady appeared.

"Give this young man a recent photograph, please Miss."

But as I started for the door he called me back.

"Work is success! I have missed one day's work in my life. At Naples a friend of mine told me I should visit Pompeii. I did that and found that the city had suspended business about 1900 years ago. That's the only day of my life I never tried to do business."

I heard a chuckle as I gently closed the door.

## Convert to Powdered Coal

The shipping board at its regular meeting, Sept. 13, approved the recommendation of the Merchant Fleet Corp. that the bid of the Maryland Dry Dock Co. for installing the pulverized coal-burning equipment on the S. S. MERCER be accepted.

The bids for converting the freighter to burn pulverized coal were as follows: Maryland Drydock Co. \$36,498; New York Harbor Drydock Co., \$75,000; Robbins Drydock, \$85,505; Morse Drydock, \$66,998; Newport News Dry Dock & Shipbuilding Co. \$79,200; Sun Shipbuilding & Drydock Co., \$81,250; W. & A. Fletcher Co. \$54,273; Bethlehem Shipbuilding Corp., \$87,400; Federal Shipbuilding & Drydock Co., \$56,280; Staten Island Shipbuilding Co., \$82,500; Philadelphia Navy Yard, \$83,013.

## To Build River Towboat

A contract has been awarded the Midland Barge Co. for a large river towboat for service on the lower Ohio

river by E. T. Slider, New Albany, Ind. Delivery is expected in the summer of 1928.

The vessel will be constructed of steel to the boiler deck and the cabin will be built of wood. The dimensions are: Length 145 feet; beam, 32 feet; and depth 5 feet 6 inches. The engines are to be of the tandem compound, noncondensing type, 15 by 26 inches by 7-foot stroke.

## Recent Sales of Ships

T. V. O'Connor, chairman of the United States shipping board on Sept. 19, announced the sale of the following vessel as follows:

CERRO GARDO, steel cargo vessel of lake type of 3610 deadweight tons built by the McDougal Duluth Shipbuilding Co. in 1919, equipped with reciprocating engines and Scotch boilers, designed to steam at 9½ knots on 26.6 tons of coal a day, sold to E. H. Duff on behalf of the Hammond Lumber Co., San Francisco for the sum of \$31,000 cash. Laid up at Norfolk, Va. since November, 1920.

## World Markets

ARIZONIAN, double deck steamship, 14,185 deadweight tons, 8511 gross tons, for about £25,000 to Italian buyers.

CLAYTON, single deck steamship, 3650 deadweight tons, 2144 gross tons, for about £18,000 to Scandinavian buyers.

GOLDENWAY, single deck steamship, 5150 deadweight tons, 3143 gross tons, for about £31,000 to Japanese buyers.

## Order Three Steamships

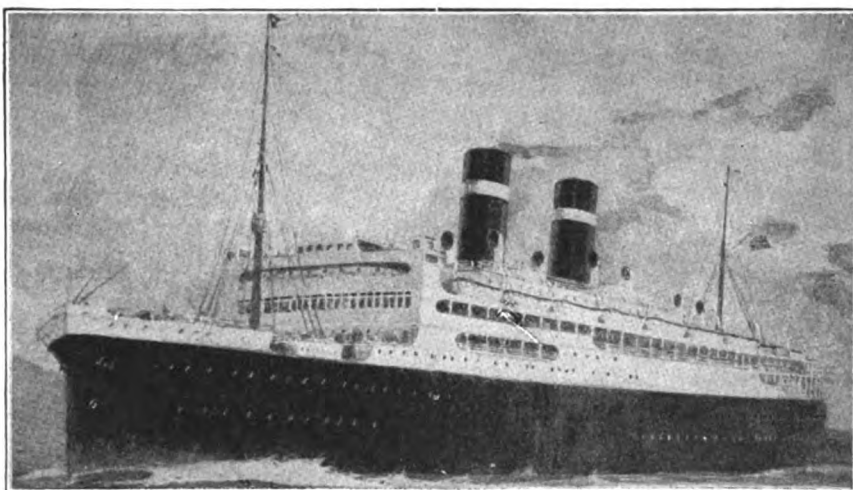
The Canadian government has awarded the contract for the construction of three steamships for the West Indian service to the British firm of Cammell Laird & Co., at \$3,849,000. The government was unable to accept the tenders of Canadian firms which were much higher, the lowest being that of Canadian Vickers Ltd., which was \$6,820,000. The three boats that are now ordered are to be delivered in 13, 14 and 15 months respectively. Two more boats will be ordered for the service and the contracts will be let soon.

## Last Trip of Season

The Cleveland and Buffalo Transit Co. steamer SEEANDBEE sailed for Buffalo, Sept. 14, on her last trip of the year. She returned to Cleveland and was laid up in winter quarters. The CITY OF ERIE and CITY OF BUFFALO will continue until Nov. 15.



S. S. CITY OF HAMILTON—CANAL FREIGHTER—BUILT FOR CANADA STEAMSHIP LINES BY MIDLAND SHIPBUILDING CO., MIDLAND, ONT., CANADA—COMPLETED WITH SISTER VESSEL, CITY OF MONTREAL, MAY, 1927—SEE DESCRIPTION IN SEPTEMBER MARINE REVIEW, PAGE 37



## S.S. California

Smart Looking

- □ -

Built to wear---  
“LIKE A  
BATTLESHIP”

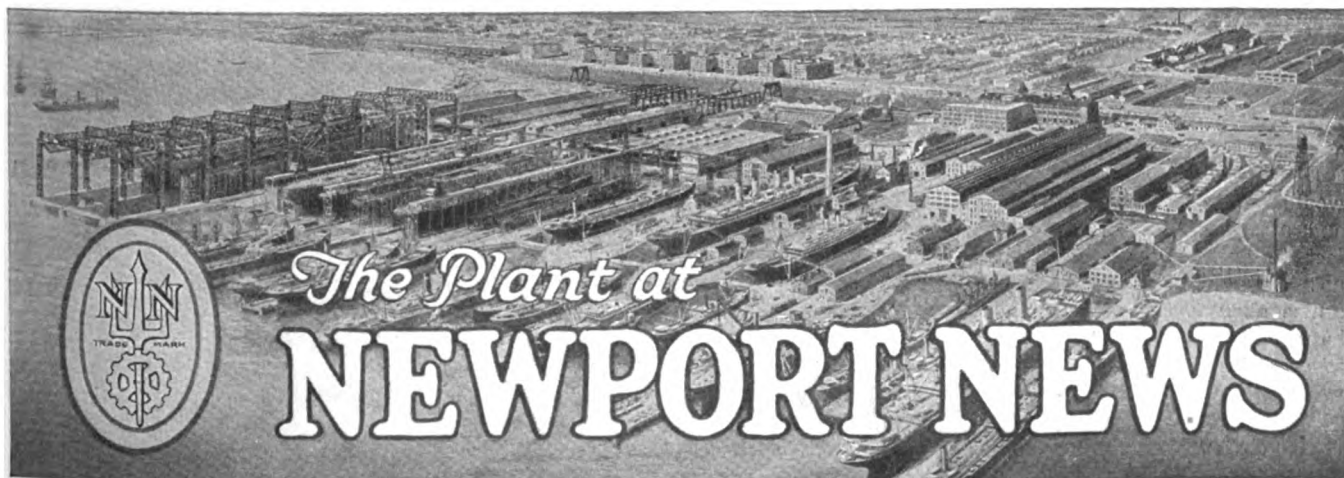
S.S. California, largest merchant ship ever built in the United States, launching October 1, is in every respect comparable to the finest transatlantic ships now in service. She will run between New York and California ports, her turbo-electric drive giving a speed of 18 knots.

Newport News Shipbuilding and Dry Dock Company ranks as one of the finest organizations in the world, in facilities for construction and repairs.

Our yard facilities are unequalled, labor is plentiful and good, and the climate permits outdoor work the year 'round.

*If you desire fine ships, or are in need of quick dependable repair service, our Engineering staff will be glad to consult with you—without cost or obligation.*

NEWPORT NEWS SHIPBUILDING AND DRY DOCK COMPANY  
NEWPORT NEWS, VIRGINIA, U. S. A. - NEW YORK, 233 BROADWAY



# Merchant Marine Needed

(Continued from Page 11)

chantman, always remembering that foreign wars may deprive us of the ships which we were using in our trade.

In the second kind of a war, fought in foreign territory, and territory means the sea as well as the land, the logical sequence of events would be

1. Gain command of the sea.
2. Maintain control of the sea.
3. Occupy with troops the necessary enemy territory.

In each of these the navy and the merchant marine are inextricably joined and, indeed, until command of the sea is established, the merchant marine has no chance safely and uninterruptedly to carry on its normal commercial mission. So from the beginning of the war it is assisting in establishing its own freedom and safety.

Let us suppose that the United States is at war with a country 2500 miles away from our own coast and that she desires to keep the war away from home. To do this she must be ready to take the offensive immediately. This does not mean that the armed forces of the country are maintained for offensive purposes or that the government maintains a political offensive. As has frequently been stated by public men—the armed forces are maintained to defend the United States—but the best defense on the outbreak of war is an immediate military offensive.

To conduct such an offensive it is necessary to send a fleet overseas where it can attack the enemy fleet in its own waters. The passage of this fleet is no small matter. The fleet will consist of battleships, cruisers, destroyers, airplane carriers, aeroplanes, submarines, minelayers and mine sweepers. In the fleet will be a large number of auxiliary vessels in which will be included repair ships, fuel ships, hospital ships, ammunition ships and store ships, the latter to carry provisions, clothing, spare parts and other material to maintain the fleet. Such a fleet might well consist of 200 naval vessels and 50,000 men.

Enroute to its destination the fleet would be subject to enemy attack and after arrival would still be subject to such attack. The fleet could not arrive in enemy territory and cruise about waiting for something to happen. Once arrived, it would have to establish itself so that it could carry out its further work, perhaps over a long period.

The obvious way to accomplish this

is to get rid of the vessels that do not fight, placing them under the best possible protection and endeavoring to gain this protection at the minimum sacrifice of fighting ships. This can best be done by the establishment of a base in or near the enemy territory, where the non-fighting ships may be reasonably secure and where the fighting ships may go for repairs, fueling, provisioning and for release of strain on the personnel.

The ideal base would then be a little bit of the United States moved close to the enemy country, but with this difference: In the United States the base could be supplied by land, while the base we have established can only be supplied by water.

Plans for the establishment of such a base would necessitate the transportation of troops, perhaps marines, perhaps soldiers, with the fleet. The protection of the base must be as independent as possible of the fighting navy afloat, which must be left free to establish command of the sea.

Soon or late an expeditionary force would be sent to enemy territory, involving naval protection and a vast number of transports. Then the navy, through its base, and the expeditionary force must be kept supplied from home with the innumerable supplies and necessities that are vital to its existence.

So the beginning of a campaign has been outlined, such campaign being based on the assumption that it is more economical and more efficient in every way to fight the war away from home.

There is one more feature to be considered—our foreign commerce. During the war the resources of the country will be primarily devoted to the efficient maintenance of our military and naval forces—but, with command of the sea, our commerce will not be dead, and will indeed be our only source of financial revenue outside the United States.

In the planning of such a campaign the navy department and the war department, in fact, the whole government, is immediately confronted by the question, "Where can we get ships?" The navy in its initial overseas campaign has not sufficient ships to maintain itself. No navy could have such ships. Not only would the cost be prohibitive, but such ships are not necessary as a part of the navy in time of peace if they can be quickly obtained in time of war. The only source of supply of such ships in war is the merchant marine, which in times of peace, is a financial asset

to the country, and, in time of war, a military necessity to the army and navy.

In our campaign, merchant ships appear from the beginning. In the overseas campaign they carry the supplies for the transportation of which the ships of the navy are insufficient. They carry the troops which are to occupy the base. They keep the base, and through it, the navy, supplied with the necessities of war. When the expeditionary force goes overseas it is carried by the merchant marine and when the force is established it is supplied by the merchant marine. Finally the merchant marine, assured of safety through the work of its ships in the navy and army, carries on the country's foreign trade.

No statistics are necessary to show that a great number of merchant ships are necessary to the military forces of a country for the successful prosecution of a war. They become an integral part of the army and of the navy and the strength of the merchant marine must be included in the study of the military strength of any nation.

People today are prone to think in the present. Having just ended one war it is hard for us to think of a future war. We have forgotten the vast sums expended in the World war that could have been saved had much smaller sums been carefully spent in preparation, or, as has so often been said, in insurance. If another war comes it will not be as simple. We shall not have as much time to get ready; so why neglect this one form of preparation, of insurance—that is not only a war time necessity but a peace time asset—the merchant marine?

## Converted Diesel Ships Make Better Speed

Though the diesel ships converted from steam under the shipping board's program are not designed to have the speed which is now becoming increasingly popular, it is interesting to note that the motorship CITY OF RAYVILLE operated for the board by the Roosevelt Steamship Co. in the Australia-India service made the voyage from Balboa to Brisbane, a distance of 7693 miles in 26 days, 5 hours and 16 minutes averaging 12.26 knots.

The motorship SAWOKLA operated by the same company, in loaded condition on her last eastward voyage, made a run of 322 miles during 24 hours, an average of 13.76 knots.

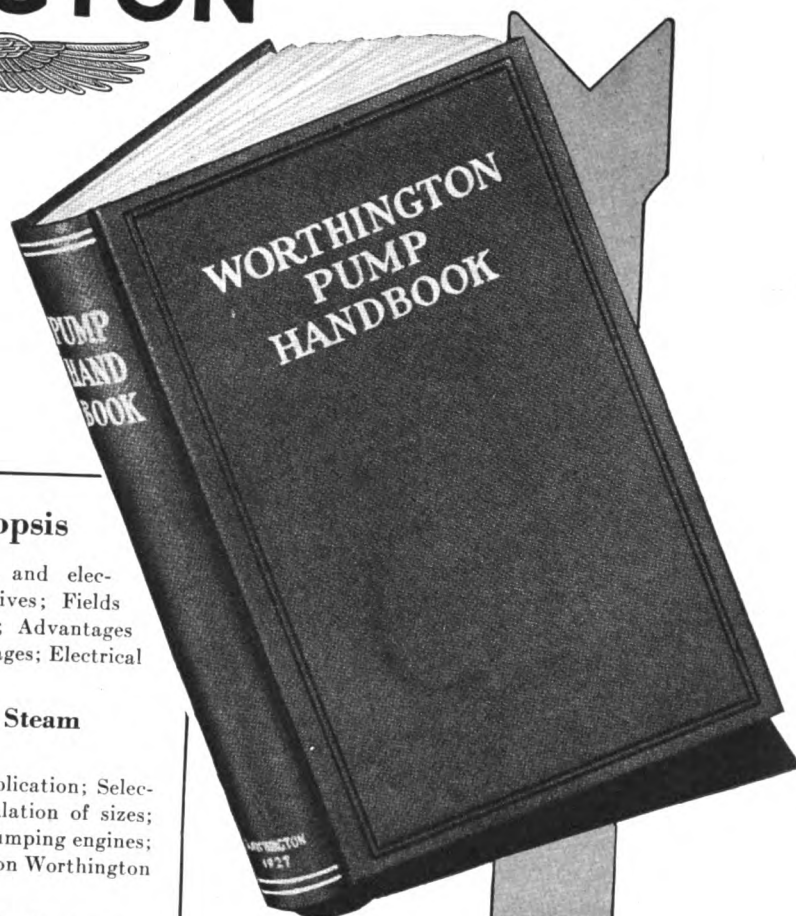


# WORTHINGTON



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Definitions; Properties of liquids; Principles of mechanics, hydraulics and thermodynamics with special reference to pumping problems; Pump selection and operation; Factors influencing pump selection; Table of pump fittings for various liquids.

#### Centrifugal Pumps

Types; Principle of operation; Design problems; Characteristics; Types for low service, general service, high pressures; boiler-feeding and special services; Sizes and data on Worthington types.

#### Power Pumps

Basic types; Advantages and disadvantages; Applications; Cost of operation; Mechanical details; Sizes and data on Worthington types.

#### Deep-well Pumps

Description of rotating types; AXIFLO and CONIFLO Pumps; Range of capacities; Characteristic curves; Fields of application; Reciprocating types; GLENDORA.

#### Power for Pump Drives

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Analysis of requirements; Properties of oil; Flow laws; Well pumping; Pipe-line pumping; Loading and unloading; Refining; Data on Worthington pumps for all of these services.

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MARINE REVIEW—October, 1927

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## Exhibition at Olympia

(Continued from Page 30)

ships, and two types of emergency compressors. Marine gears, Burns' patent, were exhibited by Stothert and Pitt, Ltd., Bath.

Babcock and Wilcox, Ltd., London, exhibited models of their patent water tube steam boilers and a totally enclosed steam winch. E. Green and Son, Ltd., Wakefield, showed types of Green economizers. Various types of oil burners were shown by Laidlaw, Drew and Co., Ltd., Edinburgh, Scotland, by J. Samuel White and Co., Ltd., East Cowes, Isle of Wight, and by Moon Bros., London. Lubricators were displayed by the Empire Engineering Co. (Manchester) Ltd., who exhibited the Marinol mechanical lubricator, which feeds a semi-solid lubricant to stern tubes, crankpins, etc.

### Oil Separators on Display

Super-Centrifugal Engineers, Ltd., London, showed several types of Sharples super-centrifugal oil separators and clarifiers, some of which were in actual operation. The exhibit included the latest design of totally enclosed oil purifier for the treatment of oils at high temperatures while avoiding any escape of vapor into the engine room. British Separators Ltd., London, showed a range of Vicken separators and oil purifiers such as are used for the treatment of fuel oil for diesel engines on vessels. These purifiers are of the enclosed type. High pressure water gages and piston valves were displayed by Richard Klinger, Ltd., London, who manufacture a special jointing under the name of Klingerit. This firm operates a branch in New York, at 16 Hudson street. Beck and Co., Ltd., Southwark, London, also showed Klinger steam valves, and boiler mountings were displayed by J. Shaw, Son and Greenhalgh, Ltd., Huddersfield, and by H. L. Mason, London.

Walter Kidde and Co., Inc., New York and London, exhibited an example of Lux-Rich system for detecting and extinguishing fires in the cargo holds of ships. A smoke detecting cabinet is installed in the wheelhouse of the vessel and connected to the holds by means of piping. The presence of smoke from a fire is shown in the cabinet in conjunction with which a battery of CO<sub>2</sub> cylinders centrally controlled floods any hold with dry carbon-dioxide gas. Simonis Ltd., London, showed a continuous foam generator for extinguishing fires; this apparatus consists of one generator with a controllable connection

for water inlet from a pump, a hopper at the top into which a single powder is fed as the apparatus is used and an outlet through which the water and powder mixed leave in the form of foam. The same firm displayed a deep lift pump for salvage work.

### Electric Generating Sets

Electric lighting plants and generating sets were an important feature of the show. Stuart Turner, Ltd., Henley-on-Thames, showed lighting plants specially fitted with a plunger type circulating pump for marine use. Ruston and Hornsby, Ltd., Lincoln, displayed a 165-kilowatt marine auxiliary generating set, as supplied to the Houlder line vessels; in addition there were a three-cylinder marine propulsion engine and centrifugal pumps. A complete motor generator set, comprising a 1200-horsepower direct current motor, driving an alternator was shown by C. A. Parsons and Co., Ltd., Newcastle-on-Tyne. Generators were also displayed by Fiat British Auxiliaries, Ltd., London, and by the Sunderland Forge and Engineering Co., Ltd., Sunderland. Special electrical equipment was displayed by Hackbridge Electric Construction Co., Ltd., Walton-on-Thames, and wireless equipment by Radio Communication Co., Ltd., London. Edison Accumulators Ltd., London and Electro-Mechanical Brake Co., Ltd., West Bromwich, displayed accumulators and grid resistances.

Several stands were occupied by manufacturers of recording instruments who displayed the latest types used in industry as well as on board ships. The Cambridge Instrument Co., Ltd., London, had arranged typical groups of instruments mounted on panels, as they would be actually installed in a vessel. They included electrical CO<sub>2</sub> and CO indicators and recorders, apparatus for recording the percentage of dissolved oxygen in boiler feed water, draft and pressure gages, temperature measuring instruments, etc.

A model bridge deck was arranged by S. G. Brown, Ltd., North Acton, London, showing the automatic helmsman, a new type 360 degrees course recorder, a new rudder angle recorder, a bearing repeater compass, and electro-megaphones. There were also the Brown master gyro compass and auxiliaries. Barr and Stroud, Ltd., Glasgow, displayed their rangefinders and marine glasses. Various recording instruments, including a dial contents gage for measuring the depth or volume of fuel oil tanks, recording thermometers for ships' refrigerators,

dial thermometers for diesel engine exhaust temperatures and for funnel base temperatures, dial draft gages, were exhibited by Negretti and Zambra, London.

Sperry Gyroscope Co., Ltd., London, demonstrated their gyro system with the Sperry gyro-compass equipment, the automatic steering equipment, and the Sperry gyro ship stabilizer. The Electric Submerged Log Co., London, showed three types of their logs, together with a set of distance recorders and speed indicator repeaters. Evershed and Vignoles, Ltd., Chiswick, London, displayed their helm indicators and marine signalling apparatus. Henry Hughes and Son, Ltd., London, displayed their filament card compass which is claimed to be free from oscillation, and an improved echo depth sounding apparatus. Ship's telegraphs and other electrical equipment was shown by Siemens Bros. and Co., London. The Telephone Manufacturing Company, Ltd., West Dulwich, London, showed the laryngophone, a telephone especially constructed for use in the noisy positions on board ships. C. A. Vandervell and Co., Ltd., Acton, London, showed an electric lighting equipment for buoyant apparatus.

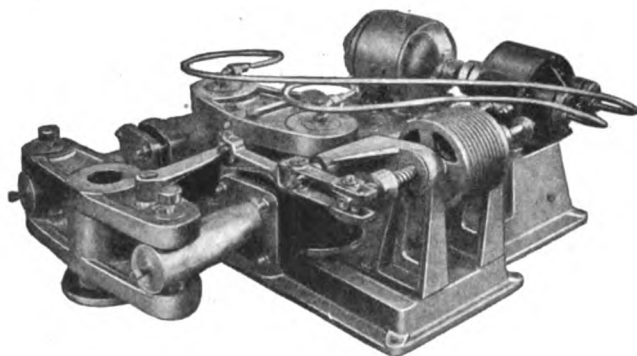
There were many exhibits relating to general engineering and more or less closely related to marine work. These included accumulators and batteries, handling equipment, acetylene and arc welding plant, packings, lubricating boxes for propeller shafts, paints and spraying equipment.

## August Lake Levels

The United States Lake survey reports the monthly mean stages of the Great Lakes for the month of August as follows:

Lakes	Feet above mean sea level
Superior .....	602.77
Michigan-Huron .....	579.46
St. Clair .....	574.74
Erie .....	572.01
Ontario .....	245.77

Lake Superior was 0.08 foot higher than in July and it was 1.75 feet higher than the low August stage of a year ago. Lakes Michigan-Huron were 0.09 foot lower than in July and were 0.85 foot higher than the August stage of a year ago. Lake Erie is 0.15 foot lower than in July and it was 0.71 foot higher than the August stage of a year ago. Lake Ontario was 0.24 foot lower than in July (since 1860 the August level has averaged 0.30 foot lower than July); and it was 0.78 foot higher than the August stage of a year ago, and 0.29 foot below the average stage of August of the last ten years.



## ***Simplicity—***

The electro-hydraulic steerer shown above represents the last word in simple, reliable application of hydraulic power to steering.

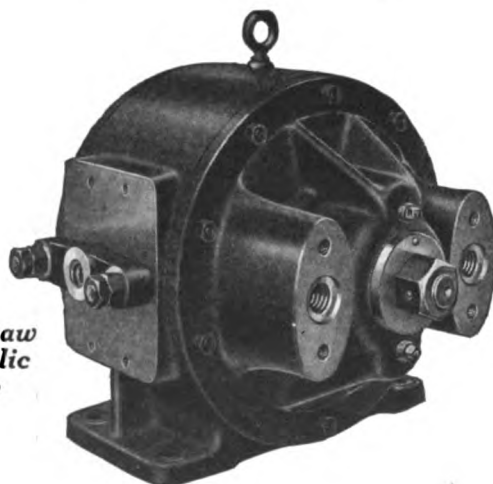
The follow-up is directly connected to a reversible-discharge Hele-Shaw Pump, which in turn is directly connected to a constant speed electric motor. The Hele-Shaw Pump, which is shown at the bottom of this page, provides tremendous hydraulic power under instant control.

As a result of their sturdy, simple design, A-E-CO Electro-Hydraulic steerers are reliable in service, easy to install and upkeep is negligible. A much smaller electric motor is used than otherwise would be required and power consumption is remarkably low.

*Write for information*

## **American Engineering Company**

**Kensington Station  
Philadelphia, Pa.**



***Hele-Shaw  
Hydraulic  
Pump***



## Diesel-Electric Ferry Fourth Order

The Golden Gate Ferry Co., San Francisco, recently placed an order for a duplicate of its three diesel electric ferries, the GOLDEN BEAR, GOLDEN POPPY, and GOLDEN SHORE which have been in service since July 4, in the passenger and auto ferry service of this company on San Francisco bay.

Machinery for the new ferry will be the same as that furnished for the other three and will consist of three diesel generating units and two propulsion motors, one for each end of

the ferry. Each generating unit will consist of a 400 brake horsepower Ingersoll-Rand marine diesel engine direct connected to a Westinghouse 250-volt generator developing 250 kilowatts at 265 revolutions per minute, and a 40-kilowatt 125-volt exciter. The propulsion motors also to be furnished by Westinghouse will each develop 950 horsepower at 180 revolutions per minute. Variable voltage system of control will be used of Westinghouse type. All speed control and maneuvering is accomplished by varying the separately excited shunt fields of the main generator.

This ferry is of the double ended type. The dimensions are: Length overall, 240 feet; beam, 44 feet; draft, 13 feet. The gross tonnage will be about 780 and there will be room for 350 passengers and 85 automobiles. The speed will be 13 knots.

## Order Diesel Generators

The Washington Iron Works, Seattle, has been given an order to supply five sets of diesel engines and equipment for generating purposes aboard the five coast guard cutters recently ordered. The engines will be Washington-Estep 4-cylinder 110 brake horsepower of the open side, 4-cycle, airless injection type. This company's diesel engines are used extensively in other branches of state and government activities.

## Launch S. S. California at Newport News

The International Mercantile Marine Co. announced on Sept. 22 that the 22,000-ton passenger liner CALIFORNIA under construction at the Newport News Shipbuilding and Drydock Co. for the Panama Pacific line service between New York and California via the Panama canal, will be launched on Oct. 1. The ship will be christened by Mrs. Roland Palmedo, daughter of P.A.S. Franklin, president of the company.

Rapid work has been done on the CALIFORNIA. Her keel was laid March 20, 1926. Launching a little over 1 year and 6 months after the laying of the keel of such a large vessel, it is believed establishes a new record for American shipyards. The CALIFORNIA will be ready for service in January next. An order has already been received for a sister ship by the Newport News Shipbuilding Co. and it has been officially announced by the International Mercantile Marine Co. that it has under consideration still a third vessel, which would mean a total investment of nearly \$21,000,000. Plans for the construction of the third vessel have not yet been announced.

## Open New York Office

The Earle Gear & Machine Co. with the main office and plant at 4707 Stenton avenue, Philadelphia, Pa. has announced the opening of a New York district office at 95 Liberty street, New York city with C. N. Walsh and George E. Barrett in charge. Earle products consist of cut gears of every description, operating machinery for movable bridges, lock gates, dredges etc.

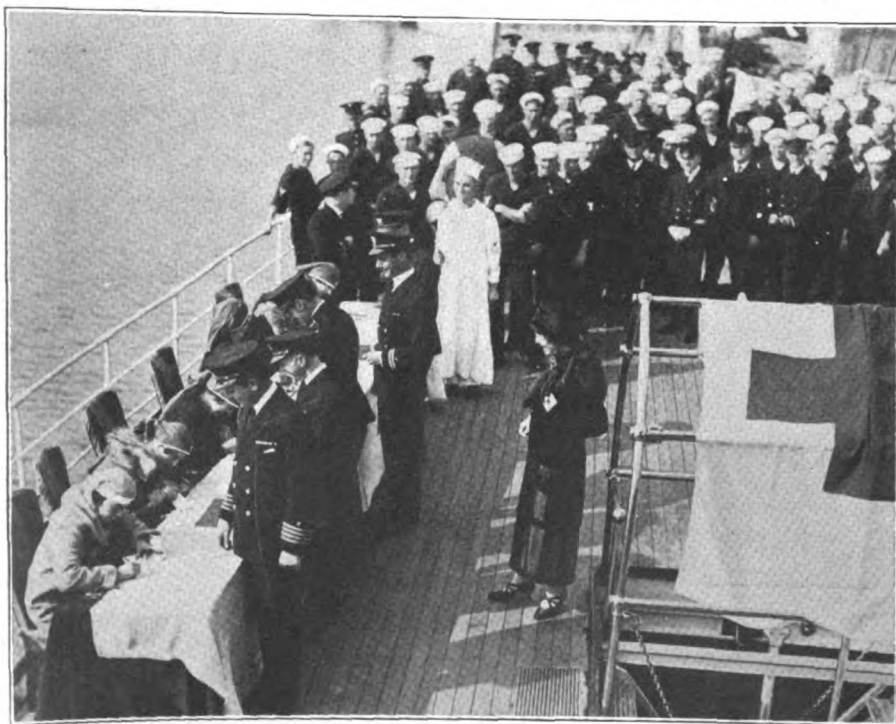
# Red Cross Calls the Roll

THE enthusiastic reception of last year's high seas roll call of membership for the American Red Cross forecasts an even better enrollment for 1928 when the tenth annual roll call is launched Nov. 11.

The ordinary dates between which this intensive enrollment of membership takes place are Armistice day, Nov. 11 to Thanksgiving Nov. 25 this year, but since the uncertain routine of the merchant marine makes such regularity difficult with respect to seafarers, the roll call will continue past Thanksgiving in their case. This will afford an opportunity for ships in passage to reach port in time for their crews to enroll.

There are many instances of the gratifying success of last year. In the port of Havre, France, an American lady secured a total of 109 annual memberships on the American steamship WEST HARDAWAY. The Merchants and Miners Transportation Co., Baltimore, reported 281 memberships from the company's fleet. The six ships of the Castner, Curran & Bullitt, Inc., returned 140 memberships, while the Atlantic Refining Co. of Philadelphia reported more than 200 members on its vessels.

With this encouragement from last year, the American Red Cross is confident of an equal or better showing in the coming enrollment period.



ENROLLING IN THE AMERICAN RED CROSS ABOARD THE  
PRESIDENT'S YACHT, MAYFLOWER

# How these rubber tubes *increase battery life*

*They look odd, these slotted tubes of hard rubber, but just read of the wonders they work for a material handling system*

THESE tubes are the heart of the Exide-Ironclad Battery. They contain the vital "active material" without which there can be no current. There are dozens of these tubes in each cell, for they make up the positive plates. Through the many fine slots the liquid solution flows freely. But the precious solid matter cannot easily escape. Its loss is retarded to such an extent that the normal working life of the active material is greatly prolonged.

You see this same simple principle at work in a coffee percolator or when you drop a little bag of tea leaves into a pot of boiling water. Yet, simple as it is, storage battery engineers worked for years before they perfected this means of increasing battery life.

## *Great power—great speed*

In addition to its long life you'll find amazing power and speed in an Exide-Ironclad Battery. You'll find built-in strength—a ruggedness that will withstand the hardest bumps and jolts. You'll find great charging efficiency—the ability to take current in quickly, easily, and with little waste. And finally, you'll find unfailing dependability, year in and year out.

Don't miss all these wonderful advantages any longer. Start saving money on your material handling costs now.

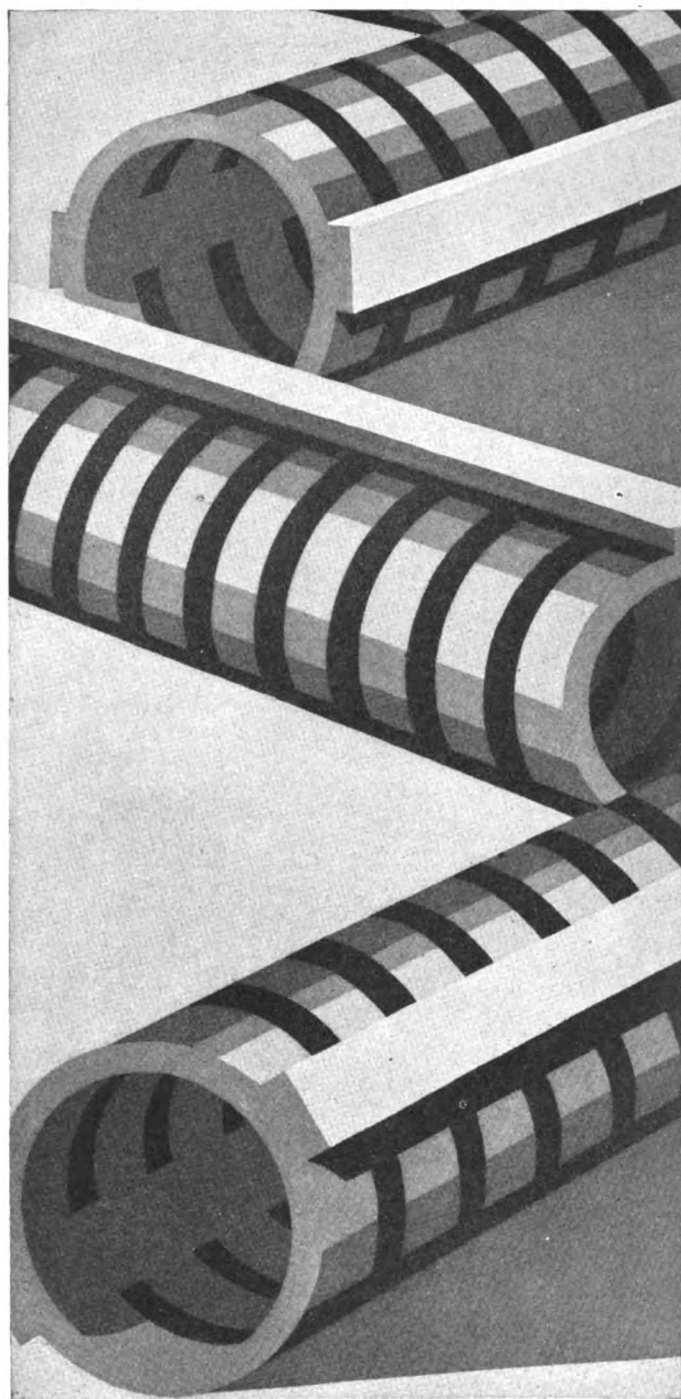
*During the past five years the number of Exide-Ironclad Battery users has increased 53.3%; the sale of new Exide-Ironclad Batteries for new motive power vehicles (street trucks, industrial trucks and locomotives) has shown consistent increase each year and a total increase of 99% over this period.*

Scores of these firms started with one Exide-Ironclad and now use nothing else. If you have not yet tried this amazing battery you are overlooking a bet. Write us for booklet No. 2865, "Facts for consideration in selecting a Storage Battery."

**Exide  
IRONCLAD  
BATTERIES**

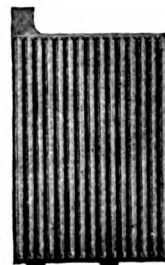
Observe  
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1927

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia  
Exide Batteries of Canada, Limited, Toronto



Cross-section showing how the rubber tube retains in place and retards the loss of the active material of the plate. The slits give the electrolyte free access to the active material.

The Exide-Ironclad positive plate consists of a metal frame from which extend vertical metal conducting rods, each surrounded by active material and cased in a slotted rubber tube.



# Late Flashes On Marine Disasters

Brief Summaries of Recent Maritime Casualties—  
A Record of Collisions, Wrecks, Fires and Losses

NAME	DATE	NATURE	PLACE	DAMAGE RESULTING	NAME	DATE	NATURE	PLACE	DAMAGE RESULTING
Anglos	July 5	Aground	Nr. Skaw	Not stated	Leon XIII	Aug. 3	Aground	Guayaquil	Not stated
Aster	July 7	Ashore	Nr. Foundiougne	Floated	Lancaster Castle	Aug. 7	Disabled	Port Said	Machinery
Anubis	July 8	Disabled	Nr. Pauillac	Machinery	Lehigh	July 29	Collision	Off Philadelphia	Port plates
Aagot	July 12	Collision	Off Dungeness	Not stated	Londonier	July 17	Aground	Buenos Ayres	Floated
Arantzazu Mendi	July 14	Ashore	Nelleplaar	Floated	Margaret	July 15	Disabled	Off Magdalen Isl.	Not stated
Adriatic	July 25	Stranded	Scotteric Island	Total loss	Mary F. Anderson	July 18	Collision	Off Nova Scotia	Damaged
Admiral Watson	Aug. 2	Ashore	Off Ivory Island	Floated	Marioneta	July 7	Stranded	Rotterdam	Not stated
Alpera	July 19	Struck pier head	Queen's Dock	Plates	Monksville	July 6	Disabled	Peel	Boiler
Absirtea	July 28	Fire	Avonmouth	No. 3 hold	Majestic	July 24	Leak	Baltimore	Sank
Arawa	July 31	Fire	Royal Albert Dock	No. 3 hold	Mayflower	July 20	Collision	Boston	Port side
Benefit	July 15	Collision	Cristobal Harbor	Sank	M. O. Crowell	July 18	Aground	Liverpool	Not stated
Boverton	July 5	Collision	Ronne	Not stated	Masconomo	July 8	Collision	Suez	Not stated
Braedale	July 13	Disabled	Harwich	Boiler	Majfrid	July 12	Collision	Rotterdam	Starboard side
B. F. Jones	July 28	Struck obs.	Sandusky	Wheel	Marjorie Parker	Aug. 2	Ashore	Castle Island	Floated
Baltic	July 14	Collision	Austruwell Roads	Starboard side	Maysie Alice	July 24	Struck sub. object	W. of Dinini	Leaking
Burlington	Aug. 12	Sank	Montreal harbor	Abandoned	Meerkirk	July 19	Collision	Off Lisbon	Leaking
Bayreper	July 27	Ashore	N. of Cape Harrigan	Plates	Mayflower	July 20	Collision	Boston	Badly
Beechpark	Aug. 5	Collided pier	New York	Total loss	Northern No. 20	July 18	Disabled	Philadelphia	Leaking
Birkdale	July 18	Fire	Lobis Island	Bows	Norland	July 23	Collision	San Francisco	Sank
Borgfred	July 21	Collision	Off Trevoze Head	Plates	North Devon	July 11	Collision	Nr. Dover	Not stated
Barrington Court	July 22	Struck jetty	Glasgow	Port quarter	Napierian	July 12	Collision	Off Dungeness	Starboard side; superstructure
Baron Forbes	Aug. 2	Collision	Monte Video	Above water line	Normandiet	July 27	Aground	Bird Island Flats	Floated
Colonia	July 7	Collision	Off Bluntes Reef	Not stated	Nomad	Aug. 9	Ashore	Hyannis	Not stated
Celilo	July 24	Collision	Scatterie Rock	Not stated	No. 10 P. L. A.	July 27	Collision	Lower Hope	Bulwarks;
Cape Race	July 25	Ashore	Pope Island	Not stated	Nantes	July 28	Sank	Saigon	Boat skid
Casco	Aug. 5	Ashore	London	Prop. lost	Oliva	July 4	Fire	Rotterdam	No. 3 hold
Columbus	Aug. 3	Disabled	Brooklyn	Sank	Opawa	July 5	Disabled	Port Natal	Steering
Commercial Spirit	Aug. 7	Capized	Nr. Masquas	Floated	Olga Seimers	July 8	Disabled	Colombo	Cylinder
Canadian	Aug. 8	Ashore	Panama Canal	Forepeak	Orleans	July 20	Ashore	Chaoons Hollow	Floated
Volunteer	Aug. 6	Struck bank	Nr. Mauritius	No. 2 hold	Osceola	July 25	Aground	Bangor	Floated
City of Christ-ania	July 28	Fire	Naples	Ashore	Penguin	July 6	Sank	Saldanha Bay	Not stated
Catania	July 14	Sprang leak	St. Pierre	Not stated	Prevaloir	July 7	Stranded	Geddie Rocks	Above water line
Caucasique	July 20	Collision	Off 1a Plata	Not stated	Paysandu	July 7	Collision	Monte Video	Engine
Corinaldo	July 25	Aground	Terneuzen	Floated	Pentecost Mitchell	July 25	Disabled	Cleveland	Damaged
Clapton	July 27	Aground	Banana Creek	Floated	Porteur	July 12	Collision	Caen	Floated
Carspey	July 28	Stranded	Buenos Ayres	Not stated	Pennsylvania Sun	July 24	Aground	Newcastle	Wheels
Dionysios Stathatos	July 21	Aground	At sea	Slight	Price McKinney	Aug. 5	Disabled	Lake Huron	Rudder
Estonia	July 16	Fire	Quarantine	No. 6 hold	Pacific Pine	Aug. 3	Collided dock	San Francisco	Rudder
Fbno	July 5	Struck sub. object	Nr. Seraglio Bank	Not stated	Parana	July 20	Grounded	Jacksonville	Rudder
Emlynian	July 7	Touched ground	Randers	Forepeak	Peter	July 29	Fire	Kaiser Wilhelm Canal	Considerable
Evandros	July 8	Collision	Nr. Dover	Not stated	Wilstermann	July 29	Ashore	Staffin Bay	Not stated
Efeu	July 11	Collision	San Francisco	Engine	Pride of Moray	Aug. 3	Aground	Off Manta	Floated
Elizabeth	July 30	Disabled	Little River Head	Not stated	Plus Ultra	July 12	Collision	Yarmouth	Lost bow-sprit
Ethelyn A. McFadden	Aug. 5	Ashore	Off sea	Considerable	Rajah	July 14	Struck wreck	South Pass	Not stated
Estonia	July 10	Fire	Off Nova Scotia	Not stated	Reginolite	July 19	Struck bank	Panama Canal	Plates
Fanad Head	July 18	Collision	Ronne	Bulwark	Robert J. Paisley	Aug. 2	Struck bot.	Little Current	Propeller
Frem	July 5	Fire	South Shields	Not stated	Respect Patriam	Aug. 8	Disabled	Philadelphia	Sank
Ferngarth	July 8	Fire	Conneaut	Lost wheel and hub	Sagaland	July 16	Collision	Off Nantucket	Steering
Frank Rockefeller	July 23	Disabled	Lake Michigan	Raised	Sinaloa	July 14	Disabled	San Francisco	gear
Favorite	July 28	Sank	Wapping	Bow board; windlass	San Antonio	July 19	Disabled	Nr. Pigeon Point	Not stated
Frognaal	July 18	Collision	Havre	Engine	Selwyn Eddy	July 25	On rocks	Tarapaulin Cove	Not stated
Georgie	July 5	Disabled	At sea	Total loss	Stanley Robert	July 27	Capized	San Joaquin River	Sank
Gloria Swanson	July 7	Fire	Chicago	Forward	San Fraterno	July 30	Struck on rocks	Off Bonet Island	
G. H. Ingalls	Aug. 11	Struck bridge	Buenos Ayres	Propeller	Sapper	July 20	Collision	Off Free Trade Wharf	Starboard after quarter
Guadiaro	July 18	Collision	Nr. Briar Dene Burn	Floated	St. Andrew	July 28	Fire	Hamburg	No. 2 and 3 hold
Homewood	July 8	Stranded	Off Gurnet	Floated	Siltonhall	July 28	Aground	Canso	Floated
Hazelpark	July 20	Aground	Hampden Shore	Floated	Taipeng	July 8	Aground	N.W. Cap Island	Not stated
Harvey H. Brown	July 30	Aground	Galveston	Plates; bow	Tugela	July 7	Disabled	Colombo	Engines
Hornby Castle	Aug. 5	Collision	Off Philadelphia	Plates; bow	Tugearrell	July 17	Disabled	Bahia	Engines
Hartbridge	July 29	Collision	Villa Constitucion	Not stated	Trefusis	July 20	Ashore	Cape Thevenard	Floated
Harmonides	July 22	Aground	Lower Hope	Stem—lost	Taiyei Maru	July 11	Stranded	Daiosaki Shima	Floated
Hawarden Castle	July 27	Collision	River Mersey	Port quarter	Tillis	July 14	Struck quay	Gibraltar	Bows
Hinderton	July 30	Collision	Cape Canso	Prop. blade; rudder	Tento	July 18	Collision	Wapping	Not stated
Iroquois	July 20	Struck rock	Nr. Windau	Not stated	The Harvester	July 26	Ashore	Beaver Island	Floated—leaking
Ingeborg	July 11	Stranded	S. W. Brighton	Abandoned	Valluscura	July 6	Collision	Monte Video	Damaged
Iverna	July 12	Fire	Suez	Starboard side	Vale of Mowbray	July 12	Collision	Caen	Damaged
Janera	July 8	Collision	Cleveland	Rudder	Venetia, A 560	July 28	Ashore	Girdleness	Floated—stern
J. M. Kennedy	July 27	Struck pier	Soo river	Floated	Wallasey	July 30	Collision	River Mersey	Not stated
John Smeaton	Aug. 1	Aground	No. Rattray Head	Floated	Woyo Maru	July 6	Aground	Yerimosake	Floated
John Dubois	July 21	Ashore	Willemstad	Not stated	Westowrie	July 8	Collision	Nr. Tyne	Sank
Kyphissia	July 4	Ashore	Hyerres Roads	Floated	Waalhaven	July 7	Fire	Off Savannah	No. 4 hold
Kumara	Aug. 6	Aground	Cape Brule	Not stated	Westdale	July 8	Aground	Queensdown Har.	Floated
Knockferna	July 18	Ashore	Yunghing Bay	Floated	West Flasco	July 11	Disabled	Trinidad	Boilers
Katping	July 6	Collision	Monte Video	Damaged	Wabasha	July 24	Disabled	Port Said	Propeller
Lucille De Larrinaga	July 8	Collision	Nr. Tyne	Not stated	West Carnifax	July 28	Disabled	Baltimore	Engine
Lambeth	July 8	Collision	Cardiff	Not stated	Western Lass	July 13	Ashore	Brisson Rocks	Total loss
Lord Cavan	July 8	Fire	River Rouge	Damaged	Willesden	July 14	Collision	Austruwell Roads	Port side
Lake Crystal	July 21	Fire			Wave Queen	July 14	Collided w/.	Stockton	Leaking
					Winnifrance	Aug. 3	Fire	Off Red Hook Flats	Not stated
					West Ira	Aug. 7	Disabled	St. Michaels	Boiler
					Yungay	July 18	Disabled	Santiago de Cuba	Boilers



**AMERICA FRANCE LINE**  
*Cosmopolitan Shipping Co., Inc.*  
42 Broadway, New York City  
North Atlantic to French Atlantic ports

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*Rogers & Webb*  
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North Atlantic ports to Scandinavian  
and Baltic ports

**AMERICAN ORIENTAL MAIL LINE**  
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**AMERICAN  
AUSTRALIA ORIENT LINE**  
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Pacific Coast ports to Australia, New  
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Passenger Services—Included in these services are the speedy passenger vessels of the United States Lines sailing from New York to principal European ports, also the American Merchant Lines ships which sail weekly between New York and London carrying a limited number of passengers at remarkably reasonable rates.

Puget Sound ports on Pacific coast to  
China, Japan and Philippine Islands

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South Atlantic ports to United Kingdom  
and continental European ports

# AMERICAN FLAG SERVICES

**AMERICAN DIAMOND LINES**  
*Black Diamond S. S. Corp.*  
67 Exchange Place, New York City  
North Atlantic Ports to Rotterdam,  
Holland, and Antwerp, Belgium

**DIXIE UK LINE**  
*Dixie Steamship Co.*  
Whitney Central Bank Bldg.,  
New Orleans, La.  
New Orleans to United Kingdom and  
Irish Ports

**AMERICAN WEST AFRICAN LINE**  
*A. H. Bull & Co., Inc.*  
40 West Street, New York City  
North Atlantic and Gulf ports to west  
coast of Africa, including Azores, Canary,  
and Madeira Islands

**AMERICAN MERCHANT LINES**  
*J. H. Winchester & Co., Inc.*  
17 Battery Place, New York City  
Passenger and freight services to United  
Kingdom ports

**AMERICAN INDIA LINE**  
*Roosevelt S. S. Co., Inc.*  
16 Beaver Street, New York City  
North Atlantic ports to Indian ports

**ATLANTIC AUSTRALIAN LINE**  
*Roosevelt S. S. Co., Inc.*  
16 Beaver Street, New York City  
New York to Australian ports  
Periodically the above two lines combine on an  
around-the-world service via the Suez Canal.

**DIXIE MEDITERRANEAN LINE**  
*Dixie Steamship Co.*  
Whitney Central Bank Bldg.  
New Orleans, La.  
New Orleans to Mediterranean ports

**GULF BRAZIL RIVER PLATE LINE**  
*Mississippi Shipping Co., Inc.*  
Hibernia Bank Bldg.,  
New Orleans, La.  
Gulf ports to Brazil and River Plate ports,  
east coast of South America

**GULF WEST  
MEDITERRANEAN LINE**  
*Tampa Intercoast S. S. Co.*  
919 Whitney Building,  
New Orleans, La.  
Gulf and S. Atl. to Portuguese, Spanish,  
and North African ports (west of Bizerta)

**MISSISSIPPI VALLEY-  
EUROPEAN LINE**  
*Mississippi Shipping Co., Inc.*  
Hibernia Bank Building  
New Orleans, La.  
New Orleans to French Atlantic  
and Belgian ports

**MOBILE OCEANIC LINE**  
*Waterman S. S. Corp.*  
Mobile, Ala.  
Mobile and Eastern Gulf ports to  
United Kingdom and continental  
European ports

**AMERICAN PIONEER LINE**  
*Atlantic Gulf & Oriental S.S. Co., Inc.*  
17 Battery Place, New York City  
North Atlantic and Gulf ports to Orient  
and Dutch East Indies

**TEXAS UKAY LINE**  
*Texas Oceanic S. S. Co., Inc.*  
Cotton Exchange Bldg.  
Galveston, Texas  
Texas ports to United Kingdom ports

**TEXAS MEDITERRANEAN LINE**  
*Texas Oceanic S. S. Co., Inc.*  
Cotton Exchange Bldg.  
Galveston Texas.  
Texas ports to Mediterranean ports

**AMERICAN REPUBLICS LINE**  
*C. H. Sprague & Son, Inc.*  
33 Broad St., Boston, Mass.  
N. and S. Atlantic ports to Brazil and River  
Plate ports, east coast of South America

**OREGON ORIENTAL LINE**  
*Columbia Pacific Shipping Co., Inc.*  
Porter Building, Portland, Ore.  
Columbia River ports on Pacific Coast to  
China, Japan, and Philippine Islands

**ORIOLE LINES**  
*Consolidated Navigation Co.*  
Citizens National Bank Building  
Baltimore, Md.  
North Atlantic ports to west coast of  
United Kingdom and Irish ports

**SOUTHERN STATES LINE**  
*Lykes Bros.-Ripley S.S. Co., Inc.*  
925 Whitney Central Building  
New Orleans, La.  
New Orleans and Texas ports to German  
and Holland ports

**TEXAS STAR LINE**  
*Lykes Bros.-Ripley S. S. Co., Inc.*  
925 Whitney Central Building  
New Orleans, La.  
Texas ports to French and Belgian ports

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Passenger, mail, and freight services to  
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*to all parts of*  
**THE WORLD**

THE exceptional freight services provided by the lines operated for the United States Shipping Board to all parts of the world have won the hearty approval and steady support of experienced and progressive American shippers.

These services comprising 26 lines and over 300 ships, sail from Atlantic Coast, Pacific Coast and Gulf Ports to ports in the United Kingdom, Irish Free State, Continental Europe, South America, the Orient, Dutch East Indies, Australasia, India and Africa—carrying their cargoes promptly and safely to their destinations and aiding American shippers materially in the expansion of their export trade.

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## UNITED STATES SHIPPING BOARD



*Merchant Fleet  
Corporation*  
WASHINGTON, D. C.



# New Trade Publications

**ELEVATORS**—Revolver Co., Jersey City, N. J., has published a pamphlet describing its combination hand-motor drive, portable tiering elevator. Sizes and capacities are given.

**WELDING AND CUTTING APPARATUS**—International Oxygen Co., Newark, N. J., has published a 24-page catalog describing its line of welding and cutting apparatus using oxygen and acetylene, hydrogen and other compressed fuel gases. Various accessories for this apparatus, and the compressed gases manufactured by the firm also are described. Directions for the use and care of welding and cutting apparatus and the safe handling of compressed gas cylinders are included.

**TRANSFER PUMPS**—Wilson-Snyder, Pittsburgh, manufacturer of pumps, has issued a bulletin on its continuously operating pumps for use in moving crude oil, molasses or lighter fluids. Features of these pumps are long stroke, direct flow, balanced piston and steam valves.

**BONNET VALVES**—Ohio Injector Co., Wadsworth, O., is issuing a circular describing a new valve designed for 300 pounds steam pressure, union bonnet regrinding type. Illustrations show the construction of the valves.

**METAL HOSE DATA**—Chas. Cory & Son Inc., 185 Varick street, New York, with offices in other principal cities, has completed the third edition of its hose bulletin. It is a 12-page pamphlet and contains illustrations, data and descriptions of seamless flexible metal hose for use as a flexible conveyance of non-solids and non-abrasives. This interesting bulletin with valuable information as to dimensions and pressure, etc. is distributed free on request.

**LIFT TRUCK SYSTEMS**—The Stuebing Truck Co., Cincinnati has issued an elaborate 36-page catalog on its lift truck. This catalog is profusely illustrated and many examples are given for the use of this type of truck. Of particular interest to marine people is its application at the Bush Terminal at the port of New York with its 8 piers, 123 warehouses, 16 industrial buildings and the most modern cold storage plant in New York City. This catalog furnishes complete specifications for deciding upon the size of truck needed in service.

**MARINE DIESEL ENGINES**—Busch Sulzer Bros. Diesel Engine Co., St. Louis, has recently issued a special catalog of 16 pages

particularly featuring recent Busch Sulzer marine diesel engine installations in commercial vessels, particularly those in the four shipping board vessels, the tanker E. T. Bedford of the Standard Oil Co. N. J., the DISTRICT OF COLUMBIA (diesel electric) Standard Oil Co. of California and the very powerful dredge NEW JERSEY building for the Great Lakes Dredge & Dock Co. at the Manitowoc Shipbuilding Corp., Manitowoc, Wis. This catalog contains many interesting illustrations and data of trial trips and also a list of the more notable marine installations where Busch Sulzer types of engines are used.

**DIESEL ENGINES**—The New London Ship & Engine Co., Groton, Conn., has issued a 48-page catalog on the Nelsco diesel engine. This catalog describes briefly the history of the Nelsco M. A. N. engine, economies to be derived with diesel operation, general construction features of the Nelsco engine and tables giving dimensions of direct, electric and gear reduction drive. The Nelsco engine is of the 4-cycle mechanical injection type and has been thoroughly tested in a great variety of marine installations.

**STEAM ENGINE**—Engberg's Electrical and Mechanical Works, St. Joseph, Mich., has issued a new 32-page catalog particularly devoted to a description of its vertical balanced piston valve engine. Illustrations are given of many installations. The application of the engine is taken up in detail. There is a very complete illustrated description covering the mechanical features of the Engberg engine. Its application as a direct drive for generating sets is also covered. It is in this field that the Engberg engine has been well known on shipboard for many years. The Engberg engine is also used for driving blowers and fans. Several pages are devoted to indicated horsepowers for varying revolutions and steam pressures. Complete information is also given about the weights and dimensions of all the various sizes of engines built.

**TUBE COUPLINGS**—The Parker Appliance Co., 10320 Berea road, Cleveland, has recently issued a 16-page catalog showing the application of Parker tube couplings for copper tube in water and gas services. This catalog is clearly illustrated showing the application of the coupling and also its various component parts. Tables giving sizes and prices are also included. Typical specifications are given for

tube couplings and fittings which include interesting and valuable information.

**ELECTRIC CONTROL**—Allen-Bradley Co., Milwaukee, has issued a folder describing its push button control for motors up to two horsepower.

**MOTORS**—Century Electric Co., St. Louis, has published a pamphlet giving various features of construction of its repulsion-start, induction motors.

**DIESEL ENGINES**—Worthington Pump & Machinery Corp., New York, has published a 27-page catalog describing its double-acting, 2-cycle, diesel engines. The catalog is illustrated well with numerous diagrams and reproductions of photographs showing the action cycle and the construction of the engines. Data on the performance of the engines also is presented.

**AUTOMATIC TEMPERATURE CONTROLLERS**—A new revised edition of its catalog of automatic controllers for temperature, pressure, humidity, liquid level, condensation and other factors which are important to the success of power plants has been issued by the C. J. Tagliabue Mfg. Co., 18 to 88 Thirty-third street, Brooklyn, N. Y. The general arrangement of the catalog resembles that of preceding editions, but it is 16 pages larger with several additional illustrations, having a total of 84 pages.

**VARIABLE SPEED TRANSMISSION**—A speed transmission combining the functions of a reducer and speed changer is described in a bulletin by the Stephens-Adamson Mfg. Co., Aurora, Ill. The effect is obtained by the use of roller bearings, controlled by a hand wheel, which allows variations of the smallest degree. Changes are made while the machine is in motion. Illustrations and data make a complete presentation.

**FORGINGS**—Drop, pressed and hammered forgings in wide variety are shown in a brochure by the American Forge & Machine Co., Canton, O. A large variety of articles produced by these processes are pictured, with a small amount of text as explanation.

**GRAPHIC RECORDERS**—Esterline-Angus Co., Indianapolis, suggests in a current bulletin the advantages of using recording instruments as inspectors of continuous operations and in testing. A list of applications is suggested.

**STEAM TURBINES**—Dean Hill Pump Co., Anderson, Ind., has issued a bulletin on its steam turbines, designed for central station use where high pressure and high temperature steam is utilized. Data are provided for determining the approximate water rate and correction factors due to superheat and back pressure. It is well illustrated.

# Business News for the Marine Trade

Tug VICTORY has been incorporated at New York, with \$5000 capital, by Kirlin, Woolsey, Hubeox & Keating.

Marine Construction Co. has been incorporated at Atlantic City, N. J., with \$50,000 capital by Carlton Godfrey.

Long Island Sound Ferries Corp. has been incorporated with 2500 shares of no par value by Hunt, Hill & Betts, 120 Broadway, New York. It will operate ferries from Manhattan to Long Island.

Bennett, Hvoslef & Co., has been incorporated at New York with 1500 shares no par value by Haight, Smith, Griffin & Denning,

27 William street. It will own and operate a fleet of ships.

McNulty Shipwright Corp. has been incorporated at New York with 50 shares no par value to operate a shipbuilding business, by Blanchfield & Kissam, 50 Broadway, New York.

Hunt's Transportation Line has been incorporated at New York with \$20,000 capital by J. L. Stoneham, Long Island City, N. Y., to operate boats and ships.

B. Turecamo Towing Corp. has been incorporated at New York with \$10,000 capital to operate a fleet of tugs, by Avitable & Eisen-

hauser, 189 Montague street, Brooklyn, N. Y.

Canadian government, which recently rejected tenders for the construction of five vessels for the Canadian West Indies service, because deemed too high, has called for new bids to be received until Sept. 1. The ships are to be for passenger and freight service, of 8000 tons capacity, turbine engined, oil burners, with refrigerating service.

Quebec Docking and Ship Repairing Co., Quebec, Que., recently organized, will construct a dry dock capable of handling all vessels except ocean liners. Construction will begin in a few weeks to be ready for spring.